



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

WIDENER



HN M7E P

THE WAY TO TEACH;
HOW NOT TO TEACH;
AND
LESSONS IN NUMBERS.

WM. M. GIFFIN.

35
E due 2018.83.3



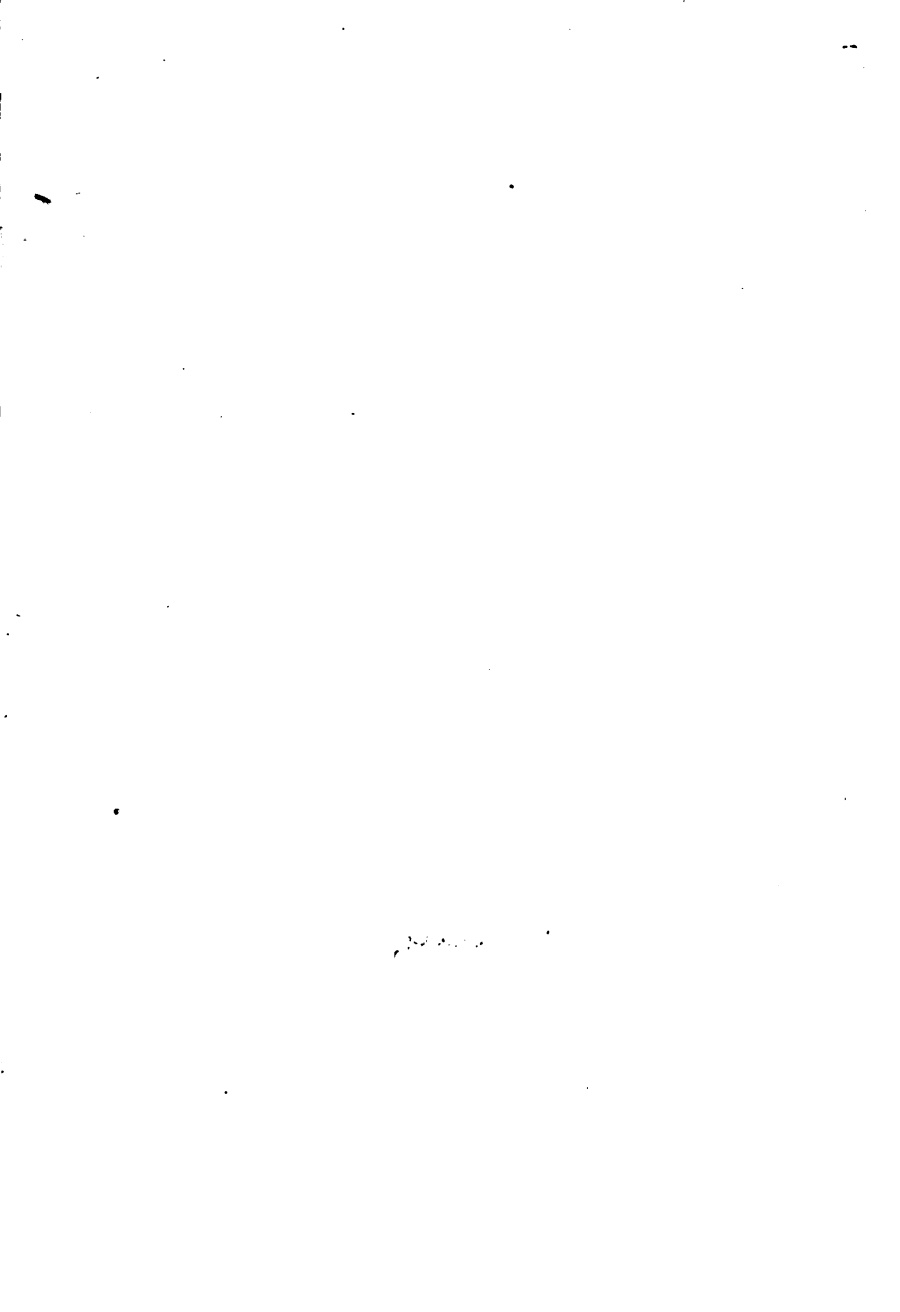
Harvard College Library

FROM THE

MARY OSGOOD LEGACY.

“To purchase such books as shall be most
needed for the College Library, so as
best to promote the objects
of the College.”

Received *12 July, 1897.*





HOW NOT TO TEACH

REVISED AND ENLARGED,

WITH

THE WAY TO TEACH,

AND

A SHORT SERIES OF NUMBER LESSONS (AFTER GRUBE).

ALSO TEST PROBLEMS FOR REVIEW EXERCISES.

BY

Milford

WM. M. GIFFIN, A.M.,

PRINCIPAL OF THE TRAINING SCHOOL, NEWARK, N. J.; AUTHOR "GIFFIN'S
NUMBER CHARTS," ETC.

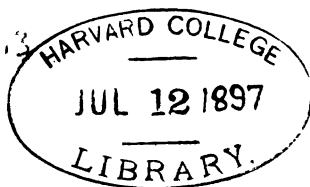
Seventh Edition.

A. S. BARNES & COMPANY,

NEW YORK AND CHICAGO.

~~VI. 15651~~

Educ 2016,83.3



Mary Osgood fund

Copyright, 1883, by A. S. Barnes & Co.

PREFACE.

IN my training work I am associated with many inexperienced teachers. It is by observing their faults and correcting them, that I have been led to make this collection of "things the teacher should not do," which I now give to the public.

I have no doubt that every teacher (myself not excepted) who reads this book will get "*hit*." If the "hitting" does any good, I shall feel paid for my effort.

In my judgment, the teaching to primary children of the quotations found in the Appendix is an excellent drill.

Emphasis, inflection, articulation, and pitch may be taught with these as well as from a reading book. The exercise creates a desire for such reading, and has a tendency to cause pupils to read more of the authors from whom the quotations are taken.

A teacher who uses them will soon find her pupils bringing in selections which they have found for themselves.

At the end of the year each pupil will know his classmates' quotations as well as his own, and can tell who wrote them.

He is fortunate who has an apt quotation at his tongue's end when needed.

W. M. G.

NEWARK, N. J.

THE WAY TO TEACH.

CHAPTER I.

TEACHING.

A teacher should tell her pupils what to do as well as what not to do.

It is far from pleasant to be made the subject of constant fault-finding. Even to us "children of a larger growth" ceaseless criticism is irritating, and with the young it often results in the souring of whatever there is that is sweet in their natures.

A teacher should know more of a subject than she has occasion to teach her class.

If she knows no more than she must teach, her questions will be narrow in range and her explanations meagre. Moreover, she will be unable to make her teaching clear by presenting the subject in a variety of ways. On the other hand, if she knows more than there is need to teach, she will have a helpful consciousness of power, which will aid her, in no small degree, not only to elucidate the matter in hand, but also to inspire her pupils with respectful confidence in her skill and capacity.

A teacher should take care that all impressions made on the minds of the pupils shall be morally wholesome.

The impressions received in the school-room go far to determine character, and are quite as truly a part of education as the direct teaching given there. It should be the teacher's endeavor, therefore, to guard the pupils from all false and hurtful impressions.

A teacher should accept the correct answer to a question as final.

It is an absurd and foolish waste of time for a teacher to say: "Yes, that is right. A noun is the name of any thing. What is a sentence? Yes, a sentence is the expression of a thought in words." The repetitions take time and impart no new information to the pupil.

A teacher should conduct her recitations independently of her text book.

Text books are simply guides for the pupil and the teacher while preparing their lessons, and, as the pupil is not expected to recite from the open book, neither should the teacher question from the open book. When the lesson is so difficult that the pupil has not been able to learn it, the teacher may properly allow both the pupil and herself to use the book. In that case, however, the next lesson should be a shorter one.

A teacher should thoroughly understand a method before trying to use it.

If a teacher tries to use a method before understanding it, she will be very apt to abuse it. The writer once knew a young teacher who had become interested in the word, or nature's, method of teaching reading, but had not quite mastered its principles. Desiring to teach the word *saw*, she talked to the pupils about the object, showed them a saw and drew a picture of one upon the board, and after arousing their curiosity wrote the word. Then, to test their knowledge, she wrote the following sentence: "I saw the boy." It was some time before she could see wherein she was at fault.

A teacher should strive to be animated.

A lifeless teacher cannot secure the attention of her class or stimulate mental activity. The pupils will involuntarily grow like the teacher.

A teacher should regularly read some standard educational paper or magazine.

Teaching is a science, and all science demands study. The best teachers are constantly discovering new and improved methods of teaching, and the best editors publish them when discovered.

A teacher should change an exercise when she sees that the class is becoming tired.

When a class is thoroughly tired, and the pupils are restless or impatient, it is not well to continue the exercise. The teacher should say pleasantly: "We will not work at this any longer now; you may sing a song,"—or, "You may take the light calisthenics, or a breathing exercise." When the pupils return to the lesson after a rest of this kind, their increased attention and quickness of perception will more than compensate for the time spent in recreation.

A teacher should look at the slate work of the pupils before commencing a new exercise.

The pupils may have made errors which if not seen and corrected by the teacher may be repeated and finally become habitual. Besides, there is nothing to encourage a pupil to do his best, if no attention is paid to his work. There is also a temptation for him to play puzzle, or draw funny pictures, if he thinks the teacher will not know it.

A teacher should become enthusiastic over her work.

The teachers who accomplish the most good are those who have energy and enthusiasm, and who show by their work that they are in earnest and believe what they do to be worth doing well.

A teacher should distinguish between a demonstrative, and an animated or enthusiastic manner.

To be noisy, flighty, or fussy is not to be animated. Animation or enthusiasm is earnestness without undue excitement.

A teacher should embrace all opportunities for showing sympathy with her pupils.

Nothing wins love more surely than sympathy. Who has not longed for sympathy? A teacher may place a barrier that will be life-lasting between herself and a pupil by saying: "O dear, Mary, you are always having the toothache or earache. I wish you would stay at home until you are well, or else stop complaining." But if she say: "Is your ear aching again, Mary? I am sorry. I am glad you like school so well that you come when you are sick; but I think it would be better if you staid at home until you are well," she may easily win the child's affection and confidence.

A teacher should see that pupils understand a lesson before asking them to memorize it.

It takes a longer time to memorize a lesson which is not understood than one which is; and in such work, there is only a sickly development of the mind, as but one of the faculties is exercised, viz., the memory. Reason, the faculty by which man is distinguished from the inferior animals, remains unexercised, and therefore undeveloped.

A teacher should frankly admit that her methods are faulty when she discovers that they are so.

"When a man is wrong and won't admit it, he always gets angry." An assumption of infallibility wins as little respect in the school-room as elsewhere.

A teacher should aim to teach her pupils to think.

Children learn to think by thinking. The questions then should be asked in such a way as to cause the children to think before they answer. "Constant thought will overflow in words unconsciously."

A teacher should satisfy herself that her explanations and especially her illustrations are rightly understood.

If she does not, the pupils will often get the most absurd notions of what she means. The following colloquy illustrates very forcibly the ease with which one may err in this respect. (Teacher.) "Now, Mary, if a steamboat should come to a body of land and sail all around it, it would find water on every side, wouldn't it?" (Mary.) "Yes, ma'am." (Teacher.) "Very well, then, that would be an island; now tell me what is an island. (Mary.) "An island is a steamboat sailing around a body of land."

A teacher should be sure that she keeps within the vocabulary of her pupils.

Otherwise that which might be easily understood by the pupils will appear much more difficult than it really is. If the words in the text book are not understood they should be explained, but not after the manner of the teacher who said: "To exceed, that is, you know, children, to transcend."

A teacher should save her voice as much as possible.

This is a duty which she owes herself. The voice may be spared a great deal by the use of signals instead of oral commands. In the matter of slate-cleaning, for example, it may be understood that when the teacher folds her hands behind her, the children are to grasp their sponges; when she lets them fall by her sides, the sponges are to be withdrawn from the desks and placed on the slates; when she folds them in front, the pupils must rub their slates. The writer has seen sixty slates cleaned in this way, in thirty seconds, without a word from the teacher.

In adopting a new method learned from others, the teacher should change it enough to make it her own.

Such adaptation of a method enables the teacher to understand it better, and use it more successfully. No teacher can secure the best results who strives to teach just as some other teacher does. No two persons can do the same thing in precisely the same manner.

A teacher should cultivate originality.

A little effort in this direction will give a freshness to her teaching which will captivate her pupils.

A teacher should be sure that she gives her pupils only work which they can do.

In that case the children will take pride in doing their work well; whereas, if they are given work (as is often the case) which they do not understand, they become discouraged, and the class is soon running over with mischief. It is not enough for a teacher to say: "Class, division is the opposite of multiplication. You may work the next eight examples." The pupils have a right to a clear, concise explanation of all subjects, and the teacher who does not give such explanations has no right to find fault with the pupils if they "are the worst class she ever saw."

A teacher should make free use of the globe when teaching primary geography.

Pupils taught with the aid of the globe will not only learn, but will also understand what the earth's shape is. Children have strange ideas of the shape and extent of the earth. Globes and relief maps seem indispensable. "Home-made" outline maps made of soft putty are good. It is a good plan to glue the productions of the several States to the maps—rice on the coast of South Carolina, grain in Ohio, cotton in Mississippi, &c. "We credit most our sight; one eye doth please our trust far more than ten ear-witnesses."

Teachers of primary classes should devote some time each day to object lessons.

Object lessons lead to the formation of habits of attention and careful observation. They exercise, develop, and improve the senses, those avenues through which the mind receives knowledge of the external world.

A teacher should decide, before beginning an object lesson, which sense she desires to improve, and govern herself accordingly.

She is then well qualified to give the lesson systematically, and to win the attention of the pupils by first arousing their curiosity, and awakening a desire to gratify the mind with new information. The attention cannot be gained, however, if the teacher does all the talking. She should often call on the children to recite, telling what they see, what they know, or what they have been doing.

The first few questions in all object lessons should have reference to something with which the pupils are familiar.

In this way the pupils are made to see that something they have already learned, will help them the better to understand the lesson before them.

A teacher should have a box of forms; holding them before the pupils.

This trains the sense of sight, and leads the pupils to observe the object and to describe it, after which, the teacher tells its name. The pupils may then be asked to name other objects having the same general form, and also to bring each day something they have discovered. The pupils soon learn to walk with their eyes open, on the lookout for something new.

A teacher should give occasional lessons in color and sound.

These train the sense of sight and hearing. After the pupils learn the names of the different colors, the teacher should obtain some small bottles of paints, and use them before the class, that the pupils may see the results. By dropping a little blue paint on a small piece of glass or paper, then dropping a little yellow paint on the blue, and mixing them a very good green is produced. Nothing is more important in these lessons on color than to cultivate the taste of the pupils as to what colors best harmonize, etc.

The sense of hearing exercised in different ways becomes very much improved. One good drill is to strike different notes on the piano and let the pupils write the numeral name of the notes struck. In a few weeks the pupils become quite familiar with the musical tones. If there is no piano a metalophone will do very well. (Prices of these instruments range from fifty cents to five dollars.) Little tunes are thus written to the delight and pleasure of the pupils. The following is an example: 1, 1, 2, 2, *3*, *2*, 3, 3, 4, 4, *5*, 5, 5, 6, 5, *4*, *3*, 2, 2, 3, 2, *1*. The children when singing hold on to the tones here indicated by italics long enough to count two.

A teacher should teach children to read as they talk.

Many teachers correct errors by first reading a sentence right, after which, they call on the pupil to read. The pupil then reads it right, but he does no thinking; he simply imitates or apes his teacher, and of course he learns nothing by such aping, except in the sense that a parrot learns. The pupil always knows how to read the sentence thus learned, but such teaching does not in the least assist him to read any other sentence.

CHAPTER II.

DISCIPLINE.

A teacher should give only such orders as she can and will enforce.

A teacher acting on this hint is apt to think before she speaks, and therefore, does not get into trouble. Every time a teacher gives an order which she does not or cannot enforce, she not only loses control of her pupils, but she also loses their respect, and sooner or later she must tender her resignation.

A teacher should see that her pupils do not lounge, whether sitting or standing.

Lounging positions are injurious to the health of the children. If they lounge when they are children, they will be apt to lounge when they are men and women, and it need scarcely be said that the ungraceful habit should be avoided.

A teacher should look out for the little acts of disorder.

If a mischievous pupil finds that he can drop his pencil without having the fact noticed, he will soon be dropping his slate. Some of the heaviest thunder showers begin with now and then a tiny drop.

A teacher should endeavor to secure punctuality.

Early habits are apt to be lasting. In after life, the children will find that to be successful they must be punctual, and this fact should be early impressed upon their minds. Tardiness leads to truancy. Truancy leads to prison.

A teacher should always be early in her attendance at school.

Otherwise, she cannot enforce her precept by example. The pupils should feel that what the teacher does is right.

A teacher should insist upon perfect order.

Perfect order is one of the requisites for perfect success. Perfect order, however, does not mean perfect quiet. All large and successful machine shops have perfect order; none that do any business have perfect quiet. A teacher's word in the school-room should be law, but the law should be scrupulously just.

A teacher should open and close school precisely at the appointed hour.

State laws are very explicit on this point. Law makers—and teachers are law makers for their pupils—should not be law breakers. Children count all other than school hours their own, and feel that they are deprived of their rights if the teacher is tardy about closing school.

A teacher should perform all she promises to perform for her class.

To be successful with children, a teacher must have their respect. A child cannot respect one whose veracity he has good reason to doubt.

A teacher should guard against threatening her pupils.

Combative children will at once accept a threat as a challenge, and a "fight" is the inevitable result.

A teacher should see that there is no boisterous disorder in the class-room during recess.

The class-room is not intended to be used as a court or a playground. Children have more respect for the room if they are made to feel that it is a place where nothing boisterous is allowed at any time. Healthy chit-chat now and then does no harm, however.

A teacher should try to make the punishment of an offence grow out of the offence.

The tables are thus turned on the offender, and the offence is not often repeated. If, for example, a boy covers his face with ink to cause a laugh, let the pupils laugh at him, the teacher joining with them, and continuing it until the jest ceases to be a funny matter to the offender, who soon sees that he has made a show of himself. He is not apt to repeat the offence.

A teacher should govern her pupils without scolding them.

“If words are sometimes to be used, they ought to be grave, kind, and sober, representing the ill or unbecomingness of the fault, rather than a hasty rating of the child for it.”

CHAPTER III.

MISCELLANEOUS.

A teacher should look after the morals of her pupils.

“What considerate man can enter a school, and not reflect with awe that it is a seminary where immortal minds are training for eternity?”

A teacher should always be thoughtful enough to thank pupils for any little attention shown to her.

Good breeding requires this, and a teacher should set a good example. I once heard of a little boy who desired very much to take his teacher a bouquet. His mother, therefore, arranged a pretty one for him. On his return from school she asked him if he had given the flowers to the teacher. “Y—e—s,” said the boy. “What did she say?” enquired the mother. “O, she grabbed ’em!” was the reply. I fear something of this kind is too common.

A teacher should show pleasure at the success of a pupil who has left school and has begun the battle of life.

The desire to receive the approbation of a teacher whom one has highly esteemed never ceases. If one who has succeeded in accomplishing anything at all worthy of praise, embraces the first opportunity to let his former teacher know of his success, and receives encouragement in return, he is stimulated to higher efforts. But if the teacher seems indifferent to his success, he is saddened and discouraged, and a feeling almost of dislike for his once esteemed teacher is the result.

A teacher should, as a rule, insist upon all pupils taking part in the recess.

“The mind ought sometimes to be diverted, that it may return the better to thinking.”

A teacher should have each pupil supplied with a slate-rag or sponge.*

There will then be no excuse for the pupils to spit on their slates, and wipe them with their coat sleeves. This practice, filthy as it is, is common in many class-rooms.

A teacher should have each pupil supplied with a pen-wiper.

The pupils will not then be wiping their pens on their clothing—a habit too often formed in the school room.

A teacher should teach pupils politely to hand her a book, paper, or any object intended for her.

To allow pupils to step to the teacher's desk and throw anything down indifferently is to teach them one of the first lessons in ill-manners.

A teacher should cultivate her voice.

“The intellect of man sits enthroned visibly on his forehead and in his eye, and the heart of man is written on his countenance. But the soul reveals itself in the voice only.” We know a teacher who has not long to have charge of a class before winning the hearts of all. Her success is largely due to her voice. As Shakespeare would say: “Her voice is ever soft, gentle, and low; an excellent thing in woman.”

* A friend of the author who read the MS. wrote to him as follows: “Leave this out. A teacher who does not know enough to find out such a thing for herself cannot be taught.”

A teacher should manifest implicit confidence in her pupils' veracity.

To suspect an innocent child of falsehood is to wound him almost beyond cure. Nothing is more saddening or humiliating. "Suspicion is the poison of true friendship." If the teacher knows a pupil has told her a falsehood, she should punish him.

A teacher should remember that first impressions often last the longest.

A word, a look, may cause a pupil to take a lasting dislike for the teacher or school. We know a young lady who says she can never overcome her dislike for a principal who, on the day she first went to school, looked at her over his glasses, and said: "You don't look as if you knew much." The principal should have remembered that, "That is not wit, which consists not of wisdom."

A teacher should keep her desk, blackboard, etc., neat and clean.

"The best ground untilled soonest runs out into rank weeds." The more attractive the school-room is, the more heartily the children will appreciate and love it.

A teacher should take her vacation for rest and not for work.

"He that will make a good use of any part of his life must allow a large portion of it to recreation."

A teacher should instantly check any laughter when a diffident pupil is reciting.

A diffident pupil is to be pitied. Nothing gives him more confidence than to know that his rights are to be protected. He gradually gains confidence in himself if encouraged.

A teacher should learn that children do not, as a rule, love at first sight.

Children must see that a teacher is worth loving before they love her. Pupils have no respect for a teacher who lets them have their own way. If a teacher is always strict, and at the same time just; if she censures not only the pupils, but also herself when in fault; if she is uniform in her discipline, and does not excuse a rank offence to-day and punish a slight one to-morrow, she has not long to wait for her pupils to love her, and then a shake of the head will stop a disorder that, perhaps, a month before would have required a sharp reprimand.

PART TWO.

HOW NOT TO TEACH.

HOW NOT TO TEACH.

CHAPTER I.

TEACHING.

A teacher should not name the pupil who is to recite, before asking a question.

If she does, the rest of the class, knowing that the question is addressed only to the pupil named, will lose interest, while, if the question is asked first, all will give attention, not knowing who may be called on to answer it.

A teacher should not write a copy for a pupil or class in a hasty, careless manner.

She is not only setting a copy, but is also setting an example ; and bad work will be the result.

A teacher should not ask any question that does not require the pupils to think.

Their answers become mechanical when such questions are asked, and they become restless and disorderly. If no thought is required, there is no development of the mind ; hence, no teaching is done.

A teacher should not try to teach reading before acquiring some knowledge of phonetics, the science of the sounds of the human voice.

She cannot teach a pupil how to pronounce a word, unless she herself knows how. She does not know, unless she can tell the pupil how to adjust his organs of speech in order to pronounce the word. But few persons who say *wich* for *which* know that *wh* is sounded *hw*.

A teacher should not send a pupil to the blackboard, pointer in hand, to read a sentence.

The pupil so armed will point to each word, and therefore will not read naturally, but as follows : I—see—the—boy.

A teacher should not teach the fundamental rules of arithmetic abstractly, but should use the objective method.

“Sounds which address the ear are lost, and die
In one short hour ; but that which strikes the eye
Lives long upon the mind ; the faithful sight
Engraves the knowledge with a beam of light.”

A teacher should not ask a class, as a class, any question that can be answered in more than one way.

If she does, she will hear from all parts of the room, “Yes, ma’am ; No, ma’am ;” and in a moment the class will be in confusion. If she desires to ask a question of the class, she can say : “How many think so ? hands up !”

A teacher should not allow a word to be mispronounced, or an error in grammar to be made, without correcting it at once.

This is a part of her work. To say that she has not time for it is no excuse. Has she finished teaching the word *what*, so long as the pupil calls it *wat* ?

A teacher should not call on the bright pupils more frequently than on the dull ones.

The diamond will always be in the rough, unless it is polished. The dull pupils will not learn if the bright ones do all the talking, while the latter will learn by hearing the dull ones. Bright pupils are, as a rule, attentive, while dull pupils are inattentive.

A teacher should not become tired of correcting faults of pupils, or of telling them how and what to do.

Children have rights, and so long as they do not understand a subject they have a right to ask and receive explanations. She who acts upon this, will, in God's good time, reap her reward.

A teacher should not do for a pupil what the pupil can, with reasonable effort, do for himself.

The mind can become vigorous only by vigorous exercise. A class which is helped too much will soon learn to wait for the teacher to do its work and answer its questions. Children should be trained to observe, to do, and to tell.

A teacher should not begin a recitation until she has prepared the lesson herself, and decided how much of the work the pupils can do for themselves.

A teacher who does not prepare herself will unconsciously do for her class what they might do for themselves.

A teacher should not allow more than one pupil to ask or answer a question at the same time.

Unless she is having a concert exercise, it is not possible for her to distinguish the answers of more than one at a time. Such reciting divides the attention of the class and teacher. Again, it is not good manners for one to interrupt another.

A teacher should not apply to another pupil for an answer to a question, before the one who is reciting has finished.

If a pupil desires to finish reciting, it discourages him and also deprives him of his granted privilege, for the teacher to say : "Oh, sit down ; you are too slow !" If he shows no desire to recite, the teacher may call on another.

A teacher should not ask a second question until the first has in some way been satisfactorily disposed of.

Time should not be taken to ask questions that are not worth answering.

A teacher should not allow a pupil to ask a question, give an opinion, or leave his seat to show a work on his slate, without first obtaining her permission.

Laxity in this respect will lead to frequent interruptions, and in a short time it will be hard to tell who is teacher and who is pupil. There should be a time for everything, and everything should be in its time. The practice also has a tendency to make the pupils saucy.

A teacher should not have too large a division reciting at one time.

It is impossible to do justice to all, if a division includes more than twenty pupils. More, I think, can be accomplished with twenty pupils in fifteen minutes, than with fifty pupils in forty minutes.

A teacher having charge of a school, should not enter a room and break into a recitation with a question of his own, without first asking permission of the class teacher, or excusing himself for his interruption.

It is quite as ill-mannered to interrupt a person speaking in a school-room, as in a parlor. It sets a bad example before the children.

A teacher should not allow a pupil to give a silly, or what the pupil thinks is a "'cute," or funny, answer to a question.

If she encourages such things, she will soon have the class trying to be more funny than wise.

A teacher should not tell one class to do "something" on their slates while another class is reciting.

"Something" is not definite. A class should always have an explicit direction or copy. A class told to do "something" will probably make funny pictures.

A teacher should not speak in a loud or unnatural tone of voice when teaching.

Let her be herself, and not overtax her organs of speech. Otherwise the whole class will adopt the same tone, and tumult and disorder will be the result.

A teacher should not allow a pupil to answer a question with the rising inflection.

The teacher is asking and not answering questions. The practice teaches the children to be undecided, and destroys the habit of independent thought. Moreover, the use of the rising inflection in answering a question is highly disrespectful ; in many cases it gives even an insolent tone to the answer.

A teacher should not call the answer to a question wrong, merely because it is not in the exact words of the text book.

There is more than one way to express the same thought. If the answer is faulty, correct it ; but commend the pupil for his effort, if it is in the right direction, and you will not dampen his ardor.

A teacher should not refuse to excuse a pupil from standing during a recitation if he complains of not feeling well.

If he is sick, it is very unkind to compel him to stand ; and if he is not sick, your kindness will be the best way to punish him. If his sickness becomes chronic, investigate the matter and put an end to the trouble.

A teacher should not teach a pupil how to bound a state before having taught him the points of the compass in his own town, and required of him the boundaries of his school and the town or city in which he lives.

Pupils must first be made to understand what is meant by north, south, east and west, or they will receive the impression that north is up hill, south down hill, etc.


A teacher should not ask pupils of ten years of age, or less, to learn more than five new words a day in spelling.

Five words a day for four days will be twenty words a week, giving one day for review. Twenty words a week will be eight hundred a year; quite enough for pupils of that age to learn.

A teacher should not teach spelling orally.

The pupil will seldom, if ever, have occasion to spell words orally in after life. It is a significant fact that children so taught will often spell a word correctly when asked to spell it orally, but will spell it incorrectly if asked to write it in a sentence.

A teacher should not take time to teach the youngest children the names of the letters.

A child can be made to understand that certain lines placed thus, , form a right-angled triangle, and that certain other lines placed thus, *leg*, form the word leg. His knowing that the first letter is *l*, the second *e*, and the third *g*, does not help him any; in fact, the names of the letters might lead him to think the word was *ell—e—gee* (elegy).

CHAPTER II.

DISCIPLINE.

A teacher should not use a commanding tone of voice when asking a favor, or giving a direction.

No one enjoys being commanded. We would all rather be asked to do a thing, than commanded to do it. Then, again, if the teacher's tone is peremptory, the children will think her harsh and arrogant, and, in their turn, will become sulky and troublesome. "Please" is an easy word to say, and its use will never harm a teacher.

A teacher should not ask a pupil if he has been out of order, when she knows he has been so.

If she does, the pupil is tempted to say, "No," thus adding a falsehood to his other offense. It is unnecessary to ask the question; when the teacher knows that a pupil is out of order, she should deal with him accordingly.

A teacher should not hesitate to ask the pardon of a pupil or class that she knows she has accused wrongfully.

Morally speaking, it is her duty to apologize in such a case. The pupil and the class will honor and respect her for doing it, and when their turn comes, they will not hesitate to follow her good example.

A teacher should not refuse to hear a pupil's side of a story; she should give him a hearing after, if not in, school hours.

Every person is entitled to a fair trial, no matter what his offense may be. There should be no absolute Monarchy in a Republican form of government.

A teacher should not look always at the faults, and refuse to see the good in her pupils.

“Whatsoever ye would that men should do to you, do ye even so to them.” We do not desire Deity to see only our faults and punish us for them. He has promised rewards as well as punishments for the “deeds done in the body.”

A teacher should not make a practice of selecting an idle, mischievous pupil for her monitor, or to do her errands.

Such pupils are usually smart enough to detect the motive; and will often misbehave in order that they may be chosen. In such a case they are rewarded, and not punished, for their faults.

A teacher should not allow a pupil to sit in the class with untidy head, or dirty hands and face.

Inattention to such things cannot fail to have a demoralizing effect on the class.

A teacher should not find fault with a pupil for doing what she herself is guilty of.

The child will see the injustice of such fault-finding, and will lose respect for the teacher.

A teacher should not be satisfied with the careless or noisy performance of a duty, and should not neglect to repeat her request until it is properly obeyed.

She is teaching not only for the present, but for the future also; and habits formed when one is young are not easily broken when one is old. There is no better way to show the class that the teacher is not satisfied, than to repeat the direction until they do properly what is required of them. *The teacher should be careful not to show any temper.* She should simply repeat the request in a calm, though positive manner, until her demand is satisfied.

A teacher having charge of a school should not correct any act of disorder or faulty recitation, while in a room observing the work of a class teacher. Neither should the class teacher be more or less strict then, than at any other time.

The children should be impressed with the fact that the class teacher has full charge of them. Then they will not think they are to behave well only when the principal is in the room. If the principal interferes, the children may lose confidence in the class teacher. The principal can correct faults privately; or, by asking for the class, he may correct the fault and do harm to no one.

A teacher should never neglect an opportunity to show her appreciation of pupils' efforts to do right, or to instill into the minds of pupils a sense of the nobleness of doing right because it is right.

Many children who are in our public schools never go to church or Sabbath school. Their only model of manhood or womanhood is their teacher. Teachers, how important it is that the model shall be a perfect one !

A teacher should not take the time of the class in which to do her own work.

A teacher has no more right to take the time of the pupils than she has to take their money. She cannot write letters, make out reports, etc., and teach at the same time. Moreover, her duty during school hours is to teach.

A teacher should not allow tattling or tale-bearing.

The tales brought to a teacher relate to petty offenses, and are usually, if not always, prompted by mean, selfish motives, which the children should not be encouraged to indulge.

A teacher should not neglect to encourage pupils to give evidence or information of any wrong done to persons or property.

This is in no way related to tale-bearing. It is just as proper for one pupil to tell that another pupil has been cutting a desk or destroying a book, as it would be for him to tell one man that he saw another man steal his purse. The moment the teacher asks for information, it becomes evidence, for which the teacher has a right to ask, and which the pupil is bound to give.

A teacher should not require a pupil to stand, sit, kneel, or take any other attitude of restraint for a prolonged period as a punishment.

Such treatment is not only wrong, but also very injurious. The pupil will never respect the teacher who takes this mode of punishing him.

A teacher should not be changeable in her discipline.

A teacher must be every day alike. Steady, uniform, even, regular discipline must be maintained. "Never a tyrant—always a governor," should be the rule.

A teacher should not stand before a class that is becoming generally disorderly, thinking to herself, "Oh, what shall I do?"

The class will know by her looks what she is thinking. Good teachers are always ready in cases of emergency; and a little positiveness is all that is required to subdue the class. The teacher should select some one pupil, and make an example of him. *The first one she sees out of order is the guilty one to her.*

A teacher should not explain any points in a lesson to a class while some of its members are working.

Pupils cannot work and listen. If the teacher has anything to say, she should ask them to give their attention, and she should not explain anything, until they all give it. When they are told to work, let them work.

A teacher should not try to startle a class into being orderly or attentive.

The class will learn to wait for the "thunder clap" before giving attention. A low, but steady, firm tone of voice will do the work much better. The desk was not made to pound upon, nor the floor to stamp upon; and neither pounding nor stamping is of the least use in obtaining order.

A teacher should not order a thing done, when a suggestion will do as well.

A class will think more of directions when they are "few, and far between." "Boys, I would not do that," is much better than, "Boys, turn this way and mind your own business, or I will give every one of you a mark."

A teacher should not consider "anything" good enough to wear to school.

A class will have more respect for a teacher who is careful about her dress, than for one who is careless. A class that respects a teacher is not hard to discipline.

A teacher should not call a pupil a sneak, liar, or by any other epithet of the kind.

The use of such language is unbecoming and causes the pupil to think ill of the teacher; it hurts his feelings, arouses his resentment, and makes him surly and unmanageable.

CHAPTER III.

ETIQUETTE.

A teacher should not begin an exercise at the opening of school until she has greeted the pupils with "Good morning, children," or, "Good morning, boys and girls!"

Courtesy demands this. The writer once heard the principal of a New York City school open her school by saying "Good morning, children!" He will never forget the thrill of pleasure he felt when the children, with bright, happy faces, responded: "Good morning, Miss ——." He ever after greeted his pupils so, knowing that human nature is the same always, and that, if there was that in the greeting which made him happy, there must be that which would cause the children to be happy. If there are those who take advantage and call out in a funny way, a good teacher will at once know how to correct them.

A teacher should not neglect to notice or acknowledge any little act of politeness or unselfishness on the part of her pupils toward herself, or toward one another.

Many pupils who attend our schools are never taught at home how to behave; in fact, they have it impressed on their minds, at home and on the street, that one should get all he can, and keep all he gets, with thanks to no one.

A teacher should not fail to teach her pupils how to be polite to her, and to one another.

She may, by a little care, make of her pupils little ladies and gentlemen, who are not so hard to govern as rough, thoughtless boys and girls are.

CHAPTER IV.

HEALTH.

A teacher should not allow pupils to wear their wrappings, overcoats, or overshoes in school.

Inattention to this matter may endanger the health of the children. They are not old enough to have good judgment, and if they err, it is the teacher's fault, as she ought to know better.

A teacher should not cause a pupil to sit with the sun pouring in upon his head, or with a cold draft blowing in upon his body.

The first may be the cause of blindness; and no constitution is strong enough to stand a draft for any length of time.

A teacher should not neglect the proper ventilation of her room.

If she does, she and the children are slowly, but surely, poisoned.

A teacher should not neglect to observe and prevent an insufficient, an excessive, a wrongly directed, an improperly distributed light in the room, a wrong position of head or body, a long-continued use of the eyes without rest, or an improper angle of the book to the eye.

City Superintendent Wm. N. Barringer, of Newark, N. J., in his Twenty-second Annual Report, says :—"When we consider the fact that nearly four-fifths of all the knowledge of the material world that enters the mind, does so through the eye, the health of this organ of vision becomes a matter

of serious consequence. It appears to me to be of sufficient importance to demand the careful attention of parents, teachers, and school authorities."

When a class is reading, or when the teacher is reading, she should not fail to see to it that the room is comfortably cool, and the feet warm; that there is nothing tight about the neck; that there is plenty of light, though not enough to dazzle the eyes; that the sun does not shine on the object the children are at work upon; that the light does not come from the front; that the head is not bent very much over the work; that the page is nearly perpendicular to the line of sight; that the book or other object is not less than fifteen inches from the eye; that near-sighted pupils do not wear the glasses intended to see distant objects with; and that the readers are not lying down.

CHAPTER V.

MULTUM IN PARVO.

A teacher should not teach a day after she has concluded that she is not, to a great extent, responsible for the physical, mental, and moral growth of the pupils under her charge.

THE POSITION OF TEACHER IS TOO GRAND, TOO NOBLE, TOO RESPONSIBLE, FOR ANY SUCH PERSON TO HOLD.

APPENDIX.

Have the children tell the name of the writer, his birth-place, and the name of something he has written, as follows :

“Sweet is pleasure after pain.”

—JOHN DRYDEN, England, 1631.

HE WROTE “DON SEBASTIAN.”

(*For other Hints, see Preface.*)

“Sweet is pleasure after pain.”

—JOHN DRYDEN, England, 1631.

(*Don Sebastian.*)

“The man whom I call deserving the name, is one whose thoughts and exertions are for others rather than himself.”

—SIR WALTER SCOTT, Scotland, 1771.

(*Waverley Novels.*)

“Unblemish’d let me live, or die unknown :

Oh, grant an honest fame, or grant me none !”

—ALEXANDER POPE, London, 1688.

(*Essay on Man.*)

“Habit is a cable ; we weave a thread of it every day, and at last we cannot break it.”

—HORACE MANN.

"Of all bad things by which mankind are cursed,
Their own bad tempers surely are the worst."
—CUMBERLAND, England.

"Truth, crushed to earth, shall rise again."
—W. C. BRYANT, Mass., 1794.
(*Thanatopsis*.)

"The groves were God's first temples."
—BRYANT.

"Once more : speak clearly if you speak at all ;
Carve every word before you let it fall.
Don't, like a lecturer, or dramatic star,
Try overhard to roll the British R.
Do put your accents in the proper spot!
Don't—let me beg you—don't say 'How?' for 'What?'
And when you stick on conversation's burrs,
Don't strew your pathway with those dreadful ur's."
—O. W. HOLMES, Mass., 1809.
(*The Boys*.)

"Teach me to love, and to forgive."
—THOMAS GRAY, London, 1716.
(*Elegy in a Country Churchyard*.)

"He who has the God-given light of hope in his breast,
can help on many others in this world's darkness, not to
his own loss, but to his precious gain."
—HENRY WARD BEECHER, Conn., 1813.
(*Buying Books*.)

"Blessed is he who has found his work; let him ask no other blessedness."

—THOMAS CARLYLE, Scotland, 1796.

(*Life of Cromwell.*)

"What considerate man can enter a school, and not reflect with awe, that it is a seminary where immortal minds are training for eternity?"

—EDWARD EVERETT, Mass., 1794.

(*Shaking Hands.*)

"Accuse not Nature, she has done her part ;
Do thou but thine."

—MILTON, England.

"Men are but children of a larger growth."

—DRYDEN, England.

"A cheerful temper, joined with innocence, will make beauty attractive, knowledge delightful, and wit good-natured."

—JOSEPH ADDISON, England.

"The loftiest and strongest trees spring heavenward among the rocks."

—J. G. HOLLAND, Mass., 1819.

(*Bitter Sweet.*)

"Absence of occupation is not rest.

A mind quite vacant is a mind distressed."

—COWPER, England, 1731.

(*Table Talk.*)

“What is it to be wise ?

’Tis but to know how little can be known,
To see all others’ faults and feel our own.”

—ALEX. POPE, England.

“Of all the causes which conspire to blind
Man’s erring judgment and misguide the mind,
What the weak head with strongest bias rules
Is pride—the never-failing vice of fools.”

—POPE.

“Any heart turned Godward, feels more joy
In one short hour of prayer than e’er was raised
By all the feasts on earth since its foundation.”

—BAILEY, England.

“To read without reflecting,
Is like eating without digesting.”

—EDMUND BURKE, Ireland, 1730.

(*Sublime and Beautiful.*)

“Oh wad some power the giftie gie us,
To see ourselves as ithers see us !
It wad frae monie a blunder free us
And foolish notion.”

—ROBERT BURNS, Scotland, 1759.

(*Scottish Poems.*)

“He prayeth best who loveth best
All things both great and small ;
For the dear God who loveth us,
He made and loveth all.”

—COLERIDGE, England, 1772.

(*Ancient Mariner.*)

"When a man has not a good reason for doing a thing,
he has one good reason for letting it alone."

—SIR WALTER SCOTT.

"If fun is good, truth is better, and love best of all."
(*Vanity Fair.*) —THACKERAY, England.

"I pray the prayer of Plato old,—
God make thee beautiful within,
And let thine eyes the good behold
In everything save sin."
(*Centennial Hymn.*) —J. G. WHITTIER, Mass., 1808.

"For of all sad words of tongue or pen,
The saddest are these: 'IT MIGHT HAVE BEEN.'"
—WHITTIER.

"If you would not be forgotten as soon as you are dead,
either write things worth reading, or do things worth writ-
ing."
—BENJ. FRANKLIN, Mass., 1706.
(*Poor Richard's Almanac.*)

"There is no substitute for thorough-going, ardent, sin-
cere earnestness."
—CHARLES DICKENS, England, 1812.
(*Christmas Stories.*)

"Do not look for wrong and evil,—
You will find them if you do ;
As you measure for your neighbor,
He will measure back to you."
—ALICE CARY, Ohio, 1820.
(*Pictures of Country Life.*)

"There is no road so smooth, but it has its stumbling places."
—CERVANTES, Spain, 1547.

(*Don Quixote.*)

"Keep company with the good, and you will be one of them."
—CERVANTES.

"Truth may bend, but never break, and will ever rise above falsehood, like oil above water."
—CERVANTES.

"Lost yesterday, somewhere between sunrise and sunset, two golden hours, each set with sixty diamond minutes. No reward is offered, for they are gone forever."

—HORACE MANN, Mass.

(*Educational Papers.*)

"When a man has no designs but to speak the plain truth, he may say a great deal in a very narrow compass."

—RICHARD STEELE, Dublin, 1671.

(*Political Writings.*)

"Nothing is easier than fault-finding. No talent, no self-denial, no brains, no character are required to set up in the grumbling business. But those who are moved by a genuine desire to do good, have little time for murmuring or complaint."

—ROBERT WEST.

"A foe to God was ne'er true friend to man."

—EDWARD YOUNG, Winchester, 1684.

(*Night Thoughts.*)

"We rise in glory as we sink in pride ;
Where boasting ends, there dignity begins."

—EDWARD YOUNG.

"He who gives freely, gives twice."

—CERVANTES.

"Be still prepared for death ; and death or life
Shall thereby be the sweeter."

—WILLIAM SHAKESPEARE, }
(*Hamlet.*) Stratford, Eng., 1564. }

"Revenge, at first though sweet,
Bitter, ere long, back on itself recoils."
(*Paradise Lost.*) —JOHN MILTON, London, 1608.

"Man, proud man,
Dressed in a little brief authority,
Plays such fantastic tricks before high heaven,
As makes the angels weep."
—SHAKESPEARE.

"To thine own self be true,
And it must follow, as the night the day,
Thou canst not then be false to any man."
—SHAKESPEARE.

"Humility, that low, sweet root,
From which all heavenly virtues shoot."
(*Irish Melodies.*) —THOMAS MOORE, Dublin, 1780.

"Errors, like straws, upon the surface flow ;
He who would search for pearls must dive below."
—JOSEPH ADDISON, England, 1672.
(*Cato, tragedy.*)

"Be not simply good, be good for something."
—THOREAU, Boston.

“Be still, sad heart, and cease repining,
Behind the clouds is the sun still shining.
Thy fate is the common fate of all,
Into each life some rain must fall,
Some days must be dark and dreary.”

—H. W. LONGFELLOW.

“Lives of great men all remind us,
We can make our lives sublime,
And departing, leave behind us
Footprints on the sands of time.”

—HENRY W. LONGFELLOW, Maine, 1807.

(*Evangeline.*)

“The talent of success is nothing more than doing what
you can do *well*, and doing *well* whatever you do, without a
thought of fame.”

—H. W. LONGFELLOW.

“Who can say,
Why to-day
To-morrow will be yesterday?
Who can tell,
Why to smell
The violet recalls the dewy prime
Of youth and buried time?
The cause is nowhere found in rhyme.”

—ALFRED TENNYSON, England.

(*Enoch Arden.*)

“Each must, in virtue, strive to excel,
That man lives twice, who lives the first life well.”

—ROB'T HERRICK, England, 1591.

(*Hesperides.*)

“Pride costs us more than hunger, thirst, and cold.”

“We seldom repent having eaten too little.”

—THOS. JEFFERSON, Virginia, 1743.

(*Declaration of Independence.*)

“An ounce of pluck is worth a pound of luck.”

—JAS. A. GARFIELD.

“Of all the dispositions and habits which lead to political prosperity, RELIGION and MORALITY are indispensable supports.”

—GEORGE WASHINGTON, Virginia, 1732.

(*Farewell Address.*)

“I’d rather be right than be President of the United States.”

—HENRY CLAY.

“Whatever I have tried to do in life, I have tried with all my heart to do well.”

—CHARLES DICKENS.

“No good book, or good thing of any sort, shows its best face at first.”

—CARLYLE, Scotland, 1795.

(*Essays.*)

“Nature fits all her children with something to do.”

LOWELL, America, 1819.

“The mill will never grind with the water that is past.”

—GEN. MACCALLUM, Scotland, 1824.
(*The Water Mill.*)

“Bad are those men who speak evil of the good.”

—H. T. RILEY, England, 1819.

“Dost thou love life? then do not squander time, for that is the stuff life is made of.”

FRANKLIN.

“Handsome is that handsome does.”

—OLIVER GOLDSMITH, Ireland, 1728.
(*Vicar of Wakefield.*)

“As Tom and his wife were discoursing one day
Of their several faults, in a bantering way,
Said she, ‘Though my *wit* you disparage,
I’m sure, my dear husband, our friends will attest
This much, at the least, that my *judgment* is best.’
Quoth Tom, ‘So they said at our marriage!’”

—JOHN G. SAXE, Vermont, 1816.
(*Wishing.*)

“Oh, noble men are they who dare to be
The champions of a poor and suffering cause!
Inspired by love of right and liberty,
The advocates of just and righteous laws.”

—DAVID MACLURE.
(*Thoughts on Life.*)

“No one has a temper naturally so good, that it does not need attention and cultivation ; and no one has a temper so bad, but that, by proper culture, it may become pleasant.”

JOHN TODD, Vt., 1842.

(*Lectures to Children.*)

“Never brag of your fish before you catch him.”

WHITTIER.

“And man is never half so blest,
As when the busy day is spent,
So as to make his evening rest
A holiday of glad content.”

ELIZA COOK, London, 1837.

(*Work.*)

“Never utter any profane speeches, nor make a jest of any Scripture expressions.”

SIR MATTHEW HALE.

(*Conversation.*)

“As you must be careful not to lie, so you must avoid coming near it.”

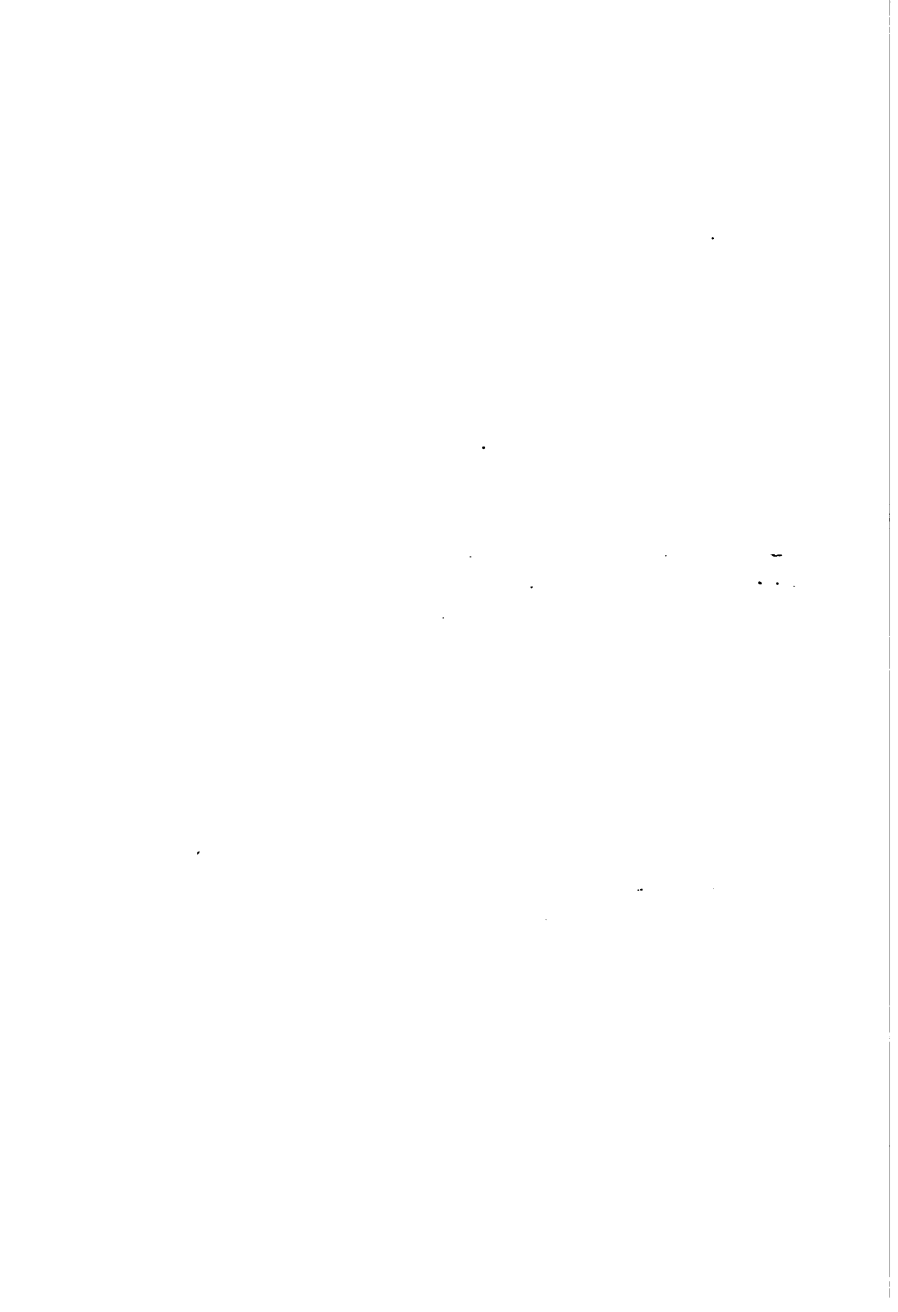
HALE.

“Be not too earnest, loud, or violent in your conversation. Silence your opponent with *reason*, not with *noise*.”

HALE.

PART THREE.

NUMBER LESSONS.



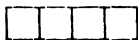
HOW TO TEACH NUMBER LESSONS.

THIS little book is for the Teacher's use. Children who can read should have books, even though they have been over all the lessons. They then depend on themselves and learn to read thoughtfully. The first ten lessons in this book are, by permission, used in the first part of the New Elementary Arithmetic published by A. S. Barnes & Co., N. Y.

Teachers will find no difficulty in teaching the fractional parts of a number, such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, or, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{4}{5}$, etc. Supply the children with ten objects of uniform size. Little blocks one inch by three inches are a very good shape and size to be handled conveniently. Let the children handle these, working as the *teacher* talks. The teacher says: "Take as many blocks as you have heads. How many is that? Put them down. Take as many as you have chins, hands, feet, ears, eyes. Put half of them down. Put the rest of them down. How many are left? Why? Who ever saw a kitty? Take as many blocks as the kitty had heads, eyes, feet." Thus the teacher may continue having the pupils take one, two, three, four, five, six, seven, eight, nine, or ten, as the case may be, having them find the ones, twos, threes, fours, etc., in each number as the class takes it up. She may also say, "Take one block two times. How many times did you take one? How many did you take? Then two times one are how many?" All kinds of questions that will teach children the relation of numbers should be asked. When the children are using the blocks, care should be taken that they do just what they are told to do.

That is, if the teacher says, "Take ONE block TWO TIMES," the children should not be allowed to take TWO blocks ONCE. Other objects than the blocks should also be used, as the windows, chairs, tables, doors, etc., or one, two, three, will mean simply the blocks.

If told to take four blocks, pupils should take four at once and place them together thus :



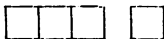
When they find the ones in four, blocks should be placed thus :



When the twos are found, thus :



When the threes are found, thus :



This would be read, one three and one over.

For a blackboard exercise the teacher may write on the blackboard (using signs) what she desires the pupils to do. This saves the teacher's voice, and requires the attention of every pupil. The teacher writes 1. Every pupil takes one block. The teacher then adds the sign, thus : $1 + 2$. The children take two more blocks. Pupil reciting 1 and 2 are 3. The teacher next writes, 1) 3 (, when the class finds the ones in three, etc., using all the signs. Continued exercises $2 + 3 + 1 + 2 = 4 + 1 + 2 = 3 \times 2 + 1 + 1 \div 2$ may be given.

When giving the lessons in the book, draw outline pictures on the blackboard, like those in the cuts. The class can then look at the picture and answer the questions. If

unable to draw, cut pictures from books and newspapers and use them.

When teaching Lesson One, show the children the picture of the money, and then show the money. Play store with them, using the blocks for apples, candy, nuts, and other things the children like. Let them buy and sell of and to one another. Get some gill, pint, and quart measures and measure water, calling it oil, vinegar, or anything they suggest. Charge so much a quart and buy a pint. Pay for five cents worth of milk with two three-cent pieces. Let one or more pupils tell how much change should be given.

Add many questions to each lesson as in Lesson Two, the following: Who is with John? How many of baby's hands can you see? How many of John's? How many in all? What does the baby want? If John gives him the flag, how many flags will John have? How many will baby have?

Have the children make the signs as shown in the cuts of Lesson Four. They can also be made with the forearms. The more ways the better.

Drill the pupils in sight adding as suggested in this lesson. Do not confine this exercise to this lesson, but use it all the time, adding new numbers as the children learn them.

Be sure that all of the tables are built by the pupils, and have them work the examples in addition and subtraction at sight only.

The thanks of the author are due to very many experienced teachers for valuable hints received from them, among which may be mentioned those of the Newton, Market,* Commerce, and Laurence Street Schools of Newark, N. J.

WM. M. G.

* Training School.



Lesson I.

One finger and one finger are two fingers.

This is a picture of Willie. How many flags has he? How many hats?

Where is one hat? Where is the other? One hat and one hat are two hats. One and one are two. How many eyes has Willie? Feet? Heads? Arms? Legs? Chins? Hands? Mouths? Shoes? Willie has one head, one neck, one mouth, one chin, and one flag. The figure 1 stands for one.* Who can tell what else Willie has one of? † He has two eyes, two feet, two arms, two legs, two hands, two shoes, and two hats. The figure 2 stands for two. Find what else Willie has two of? Say one hat and one hat are two hats. I will write on the board 1 hat and 1 hat are two hats. Say one and one are two. This is what stands for *and*, +. Its name is plus, and means to add. Read what I have written, $1 + 1$. This is what stands for are =. Also called equals, and expresses equality. Read it now, $1 + 1 = 2$. Tap two times on your slate. (Read note, page 62.)

* Teach the numbers thoroughly, then the figures.

† When this and other like questions are read either by the teacher or a pupil, all who can answer should raise their hands.

Lesson I.

CONTINUED.

Make 1 two times (or take 1 block two times). How many times did you make 1? How many ones did you make? Then two times one are how many? How many ones in two? Say two times one are two. I will write it, 2 times $1 = 2$. This is what stands for *times*, \times . It is the sign of

How many of
these



equals one of
these?



+



=



-



=



multiplication, and means multiply the number before it by the number after it. I will write it again, $1 \times 2 = 2$. This? is what stands for *how many*. Read this, $1 + 1 = ?$ Read this, $1 \div 2$ (. It is the sign for division, and means find how many of the first number will make the second number. It may be written, $2 \div 1 = ?$ (Read—How many ones in two?) What two pieces of money will make two cents? What one piece? What do we call two pints?



Lesson II.

Two fingers and one finger are three fingers.

In this picture are John and Baby. How many flags has John? How many had Willie in the other picture? How many have they both? Two flags and one flag are three flags. How many hats had Willie? How many has John? Two hats and one hat are three hats. Two and one are three. The figure 3 stands for three. Write $2 + 1 = 3$. How many hats has John? How many had Willie? 1 hat and 2 hats are 3 hats. 1 flag and 2 flags are 3 flags. 1 and 2 are three. Write $1 + 2 = 3$. *Tap your slate three times.* If Willie gives John the hat in his hand, how many will Willie then have? One hat from two hats leaves one hat. If John gives Baby one of his flags, how many flags will John have? One flag from two flags leaves one flag. Say, one from two leaves one. Say, two less one is 1.* This is what stands for less —. Its name is minus, and means subtract or take away. Write $2 - 1 = 1$.

* There are good reasons for reading the sign ($=$) *is* at all times.

Lesson II.

CONTINUED.

Make three ones on your slate. How many times did you make one? How many ones did you make? 3 times 1 are how many? How many ones are there? How many ones in three? Write 1)3 (3. Write $1 \times 3 = 3$. What three pieces of money will make three cents? What two pieces? What one? What do we call three feet? Finish these tables on your slates.

$2+1=$	$1 \times 3=$	$2+ = 3$	$+ = 2$
$1+2=$	$+2=3$	$1 \times = 3$	$\times = 3$
$1+1=$	$1 \times 2=$	$1) (2$	$1) (3$
$2-1=$	$2- = 1$	$3-1=$	$3- = 1$

How many of these



equals one of these?



+



=



-



=



SIGHT WORK.

Subtract the following :

2	3	3	2
1	1	2	1
1	-	-	-

Add the following :

1	2	1	1
1	1	2	1
2	-	-	-

Lesson III.

Three fingers and one finger are four fingers.

How many flags have John and Willie? How many more flags must they take to make four flags? Three and one are how many? The figure 4 stands for four. Write $3 + 1 = 4$.

How many feet has John? * Willie? How many have they both? 2 feet and 2 feet are four feet.

How many hands has John? How many has Willie? How many have both John and Willie? 2 hands and 2 hands are four hands. Two and two are four. Write $2 + 2 = 4$. Make four ones. How many times did you make one? How many have you? 4 times 1 are how many? Write $1 \times 4 = 4$.

Take two sticks† in your left hand. Take two sticks in your right hand. How many times have you two sticks? How many twos in four? What are two times two? Write $2 \times 2 = 4$. Write 2) 4 (2.

Make four ones. Rub out one of the ones. How many are left? 1 from 4 leaves how many? Write $4 - 1 = 3$. Rub out another 1. 2 from 4 leaves how many? *Tap your slate four times.* Finish these tables.

$3 + 1 =$	$4 - 4 =$	$\times = 4$
$2 + 2 =$	$4 - = 2$	$- = 4$
$2 + 1 =$	$4 - = 1$	$\times = 4$
$2 \times 2 =$	$4 - = 3$	$+ = 4$
$1 + 2 =$	$4 \times = 4$) (4

* Have two pupils represent John and Willie, thus giving the class living objects, and combining a lesson on physiology and numbers.

† Any object may be substituted for stick.

Lesson IV.

Four fingers and one finger are five fingers.



How many tops (or blocks) are on the first line? On the second? How many on both? Four tops and one top are how many tops? Four and one are five. The figure 5 stands for five. Write $4 + 1 = 5$. Hold up 3 fingers with your left hand. Two with your right hand. How many is that? Three and two are how many? Write $3 + 2 = 5$. Make five dots.* Rub out four. How many remain? Five less four leave what? Write $5 - 4 = 1$. Make 5 ones. How many times did you make 1? $1 \times 5 = ?$ How many ones in 5? Write $1) 5 (5$. Tap your slate five times. Finish tables.

$4 + 1 =$	$5 - 3 =$	$3 + \quad = 5$	$\times \quad = 5$
$2 + 2 =$	$4 - 2 =$	$\quad + 2 = 4$	$\quad + \quad = 5$
$3 + 2 =$	$5 - 1 =$	$\quad \times 4 = 4$	$\quad \times \quad = 4$
$5 - 4 =$	$1 \times 4 =$	$5 - \quad = 2$	$1) (5$

How many of these



equals one of these?



Add	2	3	2	2	3	2	2	2	1	1	3
at	1	1	2	3	2	2	1	1	1	1	1
sight.	3					1	2	1	2	3	1
						5					
Subtract		5	5	5	5	4	4	4			
at sight.		1	2	3	4	1	2	3			
		4									

* Or take 5 blocks.

Lesson IV.

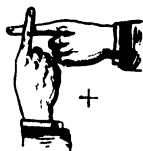
CONTINUED.

What four pieces of money will make four cents? What two equal pieces? What one piece of money will make five? What two pieces? What three? What four? How many one-cent postage stamps can you buy for 5 cents? What is one two-cent stamp and one three-cent stamp worth? What will three apples cost at one-cent each? Two oranges at 2 cents each? If John had four cents and gave Willie one-half of them, how many did he give him? What is one-half of four? Mary had 2 apples and gave sister one-half of what she had, how many did she give her? One-half of 2 is how many? What do we call 4 quarts? * (Have the children measure sand or grain.)

Teacher write figures on blackboard. Touch 2, 1, 2, or 3, 1, 1, with the pointer, being careful to have the sum not more than 5 until the pupils are farther advanced. Teach pupils to read as rapidly as the figures are touched; as in first example 2, 3, 5, all having answer to raise their hands. Have the pupils make the signs as shown in the cuts. Also find one, two, three, four, five.



times.



+

and.

	1	2	1	
2	4	4	3	
3	1	3		
1	5	5	3	
1	2	5		
1			4	



are.



less.

* It is well to have pint, quart, and gallon measures.



Lesson V.

Five fingers and one finger are six fingers.

How many boys have on hats or caps? How many have not? How many boys in all? Five and one are how many? The figure 6 stands for six. Write $5 + 1 = 6$. When three of the boys go home how many will be left? Six less three are how many? Write $6 - 3 = 3$. How many boys in the boat? How many on land? Two threes are how many? Write $3 \times 2 = 6$. What is swimming in the water? How many feet has the dog? How many have the dog and one boy? Four and two are how many? Write $4 + 2 = 6$. What two *equal* pieces of money will make six cents? What other two? What three *equal* pieces? What four pieces will make it? How many 3-cent stamps can I buy with 6 cents? How many 2-cent stamps? How many ones? How many fives? Tap six on your slate by ones. By twos.* How many twos in 6? By threes. How many threes in 6? Make six ones. Rub out one-half of them. What is one-half of six? Write $\frac{1}{2}$ of $6 = 3$? $\frac{1}{2}$ of 2? $\frac{1}{2}$ of 4? $\frac{1}{2}$ of 6? Of 3?

* Indicate taps by dots. Thus,

Lesson V.

CONTINUED.

Finish these tables.

$3 \times = 6$	$2 + 3 =$	$2) 6 ($
$\times 3 = 6$	$3 + 2 =$	$3) 6 ($
$+ 4 = 6$	$2 \times 1 =$	$1) 6 ($
$+ 1 = 6$	$3 \times 2 =$	$\quad - = 2$
$3 + = 6$	$6 - 5 =$	$\quad - = 2$
$1 \times = 6$	$4 - 3 =$	$6 - 4 =$
$4 + = 6$	$2 + 2 =$	$3 + = 4$
$+ 5 = 6$	$3 + 3 =$	$4 + = 5$

$\times = 6$	Add	3	2	4	5	1	3
$+ = 6$	at sight.	<u>3</u>	<u>4</u>	<u>2</u>	<u>1</u>	<u>5</u>	<u>3</u>
$- = 6$		6					
$\times = 6$							
$\div = 6$		3	2	1	2	1	2
$\times = 6$	Add	2	3	2	1	1	3
$+ = 6$	at sight.	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>1</u>
$- = 6$		6					
) (6							
	Subtract	6	6	6	6	6	6
	at sight.	<u>5</u>	<u>4</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>5</u>
		1					

Teacher,* take a pencil in your hand and make motions five or six times as if tapping. Do not be surprised if many of the class tap as long as you keep up the motion, for your pupils have not yet learned to *think* and are only aping. Tell them to think one, two, and to stop tapping when they tap two times. Continue until all do it right. The moment they begin to *think*, they will do it right. When they begin to think, they begin to *use the mind*. When the mind begins to *act*, it begins to *develop*.

* See Lesson I.



*One
finger.*

1

I.



*Two
fingers.*

2

II.



*Three
fingers.*

3

III.



*Four
fingers.*

4

IV.



*Five
fingers.*

5

V.

Lesson VI.

How many hands in this group? How many fingers up has the first hand? What part of a quart is 1 pint? The second hand? What do we call two pints? What part of a gallon is 2 quarts? The third hand? The fourth hand? What do we call 4 quarts? The fifth hand? How many more fingers raised has the second hand than the first? The third than the second? Fourth than the third? Fifth than the fourth? Fourth than the second? Fourth than the first and second together? How many more has the fifth than the third? Than the second? Than the first? Than the first and the second? Than the third and the second? Take as many fingers from the fifth hand as the first hand has raised, and how many would remain? If taken from the fourth? Third? Second? First? The figure 0 stands for nothing or naught.* Make 1, 2, 3, 4, 5.

* Its name is naught or zero.

Lesson VII.

Six fingers and one finger are seven fingers.

How many fingers
raised has this hand?



How many fingers
raised has this hand?



Raise all the fingers on your left hand. One on your right hand. Raise one more. How many fingers have you raised? Six and one are how many? The figure 7 stands for seven. Write $6 + 1 = 7$. Raise the seven fingers again. Drop your right hand. How many have you up now? Seven less two are how many? Write $7 - 2 = 5$. Make four ones. Make three more under them. How many did you make first? How many second? How many in all? Four and three are how many? Write $4 + 3 = 7$. Rub out three of the ones. How many are left? Write $7 - 3 = 4$. How many more is seven than six? Than five? Three? Four? Two? One? How many ones will make seven? Then how many ones in 7? Write $1) 7 (7$. How many cents are five cents and two cents? How many books are three books and four books? What four pieces of money will make seven cents? What three pieces? What are seven days called? How many letters are I, V, X, L, C, D, M? These are the seven letters with which we write numbers by the Roman method?

Lesson VII

CONTINUED.

Make seven ones. How many times did you make one? How many ones in 7? How many sevens in 7? Seven times one are how many? Write $1 \times 7 = 7$. Write $1) 7 (7$. $7) 7 (1$. How many are one two and two ones? Finish these tables.

$1 + = 7$	$\times 7 = 7$	$- = 3$
$3 + = 7$	$4 + 2 =$	$+ = 4$
$4 + = 7$	$7 - 2 =$	$\times = 5$
$6 + = 7$	$7 - 5 =$	$+ = 1$
$2 + = 7$	$- 4 = 3$	$- = 6$
$5 + = 7$	$7 - 3 =$	$+ = 7$
$7 + = 7$	$+ 4 = 6$	$\times = 2$
$1) 7 ($	$7) 7 ($	$) 7 ($

Add	3	4	2	5	6	1	3	7
at sight.	<u>4</u>	<u>3</u>	<u>5</u>	<u>2</u>	<u>1</u>	<u>6</u>	<u>4</u>	<u>0</u>
	7							

	3	4	5	3	3	2	1	2
Add	2	2	1	2	1	3	1	2
at sight.	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>
	6							

Subtract	7	7	6	6	5	5	7	7
at sight.	<u>3</u>	<u>4</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>0</u>
	4							



Lesson VIII.

Seven fingers and one finger are eight fingers.

Hold up 7 fingers. Hold up one more. How many are raised now? The figure 8 stands for eight. Write $7 + 1 = 8$. See the two little dogs Jip and Spot. Jip has two of his feet in the air. How many feet has Jip? How many has Spot? How many have both? Four feet and four feet are how many feet? Four pencils and four pencils are how many pencils? Count Jip and Spot's legs, two at a time. 2, 4, 6, 8. How many twos is that? Four twos are how many? How many twos in eight? Write $2 \times 4 = 8$. Four times two are how many? Write $4 \times 2 = 8$. How many pencils have I in my right hand? How many in my left hand? How many in both hands? How many times have I four? Write $4 \times 2 = 8$. When Jip's feet are all down how many feet are on the ground, counting Spot's also? How many were on the ground when Jip raised two? Eight less two are how many? Write $8 - 2 = 6$. How many ones will make 8? How many ones in 8? Write $1 \times 8 = 8$. $\frac{1}{2}$ of 8 = ? $\frac{1}{4}$ of 8? $\frac{1}{8}$ of 8?

Lesson VIII.

CONTINUED.

What four equal pieces of money will make 8 cents? What two pieces will make 8 cents? What three? Four? Eight? What do we call 8 quarts? How many gallons are 8 quarts? Make eight ones. Eight times one are how many? Make four twos. Four twos are how many? Four times two =? How many twos in 8? How many fours? How many more is 8 than seven? Six? Five? Four? Three? Two? One? Finish these tables.

2) 8 (4) 8 () 8 (8
8-2 =	5+3 =	× = 8.
8-1 =	2×4 =	+ = 8.
8-4 =	4×2 =	- = 8.
8-3 =	4+4 =	× = 8.
8-5 =	6+2 =	+ = 8.
8-7 =	7+1 =	+ = 8.
8-8 =	8+0 =	+ = 8.

Add	3	5	2	6	4	7	1	8
at sight.	<u>5</u>	<u>3</u>	<u>6</u>	<u>2</u>	<u>4</u>	<u>1</u>	<u>7</u>	<u>0</u>
	8							

	2	3	2	1	1	1	2	3
Add	2	3	3	3	3	4	2	0
at sight.	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>5</u>
	6							

Subtract	8	8	8	8	8	8	8	8
at sight.	<u>5</u>	<u>6</u>	<u>7</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>8</u>
	3							

Lesson IX.

Eight fingers and one finger are nine fingers.

1 1 1 1 1 1 1 How many ones on this line?

1

How many on this line? How many on both lines? Eight ones and one one are how many ones? The figure 9 stands for nine. Write $8+1=9$.

How many hats are on this line?



How many on this line?



Five hats and four hats are how many hats? Write $5+4=9$. How many hats can you see? How many are tipped over? Cover four of the hats. How many can you see now? Nine hats less four hats leave how many hats? $9-4=?$ Write $9-4=5$. How many ones can you see? Cover six of the ones. How many can you see now? Nine ones less six ones leave how many ones? $9-6=?$ Write $9-6=3$. Make 1 nine times. How many ones have you? $1 \times 9=?$ Write $1 \times 9=9$. How many ones in 9? What three equal pieces of money will make nine cents? Write 3)9(3. What other three pieces? What other three? What five? What nine? Finish these tables.

8+ = 9	9-3 =) (9
7+ = 9	9-6 =	+ = 9
3+ = 9	9-5 =	- = 9
4+ = 9	9-8 =	\times = 9
2+ = 9	9-7 =	+ = 9
1+ = 9	9-9 =	+ = 9
6+ = 9	9-2 =	\times = 9
1 \times = 9	9-1 =	+ = 9

ADD AT SIGHT.

5	4	2	7	3
4	5	7	2	6
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

SUBTRACT AT SIGHT.

9	9	9	9	9
6	5	2	4	8
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Lesson X.

Nine fingers and one finger are ten fingers.

How many different figures have we used to write numbers? You may each write the ten figures. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. What is the value of the first character? Hold



up five fingers with your left hand? Four with your right hand? How many fingers have you raised? Raise one more. Nine and one are ten. How many fingers have you now raised? How many fingers are raised in the picture? How many fives is that? How many fingers must we have in a group to make five groups? How many fingers in a group to make two

groups? How many in a group to make one group? All numbers of ten or more are represented in groups of ten and parts of ten. These figures 10 stand for ten. It means one group of ten and nothing more. Finish these tables.

$$7 + 3 =$$

$$8 + 2 =$$

$$5 + 5 =$$

$$6 + 4 =$$

$$3 + 7 =$$

$$9 + 1 =$$

$$4 + 6 =$$

$$5) 10 ($$

$$2) 10 ($$

$$10 - 7 =$$

$$10 - 1 =$$

$$10 - 6 =$$

$$10 - 3 =$$

$$10 - 5 =$$

$$10 - 4 =$$

$$10 - 2 =$$

$$10 - 8 =$$

$$10 - 9 =$$

How many of
these



equals one of
these?



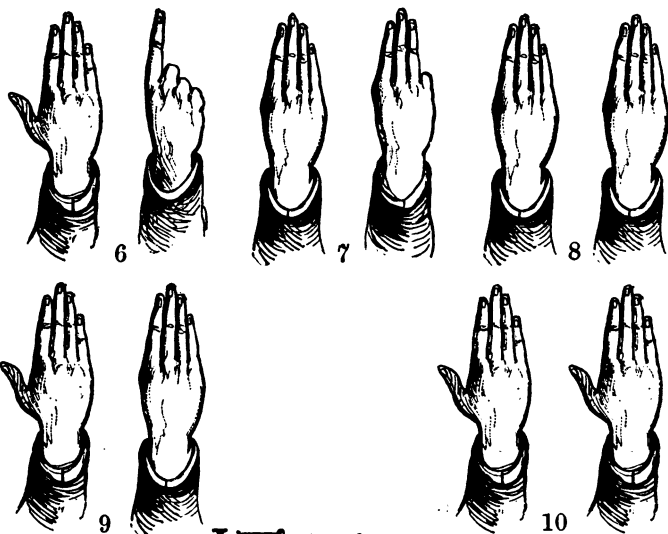
Lesson XI.

How many fingers on one hand? How many on two hands? Five fingers and five fingers are how many fingers?

Make five ones on one line. Make five ones on another line. Five ones and five ones are how many ones? Five and five are how many? Write $5 + 5 = 10$. Count seven beads on this wire; count three on the next wire.* Count how many are on both wires. Seven beads and three beads are how many beads? Write $7 + 3 = 10$. I will push back the three beads; how many are left? $10 - 3 = 7$. How many more than nine is ten? Than eight? Than seven? Than six? Five? Four? Three? Two? One? What two equal pieces of money will make ten cents? How many fives in ten? What four pieces will make ten cents? What three? What two? What five? How many five-cent postage stamps can I buy for ten cents? How many three-cent stamps? How many two-cent stamps? Make five twos, 2, 2, 2, 2, 2. Count then by twos, 2, 4, 6, 8, 10. How many twos make ten? How many times did you make two. $2 \times 5 = ?$ Write $2 \times 5 = 10$. Finish these tables.

10) 10 (+	= 10
8 + = 10	+	= 10
7 + = 10	+	= 10
2 \times = 10	—	= 10
5 \times = 10	\times	= 10
9 + = 10	\times	= 10
1 \times = 10	\times	= 10
6 + = 10)	(10
2) 10 ()	(10

* A string of buttons may be used, and the teacher or pupils may use the pointer to move the buttons back and forth as the class recite.



Lesson XII.

How many hands in the first group? How many fingers raised has the first hand? The second? Five and one are how many? Write the figure that stands for six, 6. How many fingers raised has the first hand in the second group? The second? Four and three are how many? Write the figure that stands for seven, 7. How many fingers has the first hand in the next group raised? The second hand? Four and four are how many? Write the figure that stands for eight, 8. How many fingers has the first hand in the next group raised? The second? Five and four are how many? Write the figure that stands for nine, 9. How many fingers has each hand raised in the last group? Five and five are how many? Write the figures that stand for ten, 10. Write 6, 7, 8, 9, 10 with letters. VI., VII., VIII., IX., X.

Lesson XII.

CONTINUED.*

How many of the hands have one finger raised? How many have two? Three? Four? Five? In the first group which hand has more fingers raised, the first or second? How many more? In the second group? Third? Fourth? Fifth? Count the hands by ones. By twos. How many twos? How many hands? How many twos in ten. Ones in ten? Tens in ten? Fives in ten? How many fingers are raised in the first and second group? Second and third? Third and fourth? Fourth and fifth, etc.? What is one-half of 10? Of 8? Of 6? Of 4? Of 2? $\frac{1}{4}$ of 8? $\frac{1}{4}$ of 6? $\frac{1}{4}$ of 8?

Add	4	6	1	9	2	8	3	7	10
at sight.	<u>6</u>	<u>4</u>	<u>9</u>	<u>1</u>	<u>8</u>	<u>2</u>	<u>7</u>	<u>3</u>	<u>0</u>
	10								

	4	3	2	1	8	1	2	7	0
Add	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>1</u>	<u>0</u>	<u>8</u>	<u>2</u>	<u>0</u>
at sight.	<u>4</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>1</u>	<u>9</u>	<u>0</u>	<u>1</u>	<u>10</u>

Subtract	10	10	10	10	10	10	10	10	10
at sight.	<u>3</u>	<u>4</u>	<u>1</u>	<u>9</u>	<u>2</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
	7								

* Use this lesson after 20 is taught.

Lesson XIII.

Work these problems on your slates.*

1. John had three pencils and Willie gave him two more ; how many pencils had he then ?

2. Mary paid 6 cents for candy and gave the clerk one dime; how much change should she receive back ?

3. When apples are worth 2 cents each, what will 4 apples cost ?

4. How many pints of peanuts can you buy for 10 cents, when 1 pint costs 5 cents ?

5. Mary found 1 pin, John found 5, and Willie found 3 ; how many pins did they all find ?

6. How many more pins did John find than Mary ? Than Willie ? Than Mary and Willie together ?

7. George has 3 cents and John has 2 times as many ; how many has John ?

8. One quart of vinegar is worth 10 cents. What is one pint worth ?

9. At 10 cents a quart, how many quarts can be bought with five two cent pieces ?

10. What will one pint of milk cost at 2 cents a gill ?

11. How many apples can I buy with 10 cents if one apple costs 2 cents ?

12. How many are 10 cents less 2 cents + 1 cent + 3 cents ?

13. If there are 5 boys in a room and 2 of them go out, how many boys are still in the room ?

* Many examples of this kind should be given to the pupils by the teacher. After working them orally, have the pupils work them on their slates.



Lesson XIV.

How many groups of ten ones are there? How many over? Ten and one are eleven. These figures 11 stand for eleven. It means one ten and one over. If we add one more one, how many groups of ten, and how many over? Ten and two are twelve. These figures 12 stand for twelve, and means one group of ten and two over. What do you call 12 months? Inches? Eggs? Hours? How many cents would make 12 cts.? What four equal pieces of money would make 12¢? What three pieces? What six equal pieces? What five pieces? What four pieces? What other four?

NOTE.—In like manner the teacher can develop the other numbers until two or more groups of tens are developed.

- 10 + 1 = 11. Count eleven beads on the abacus.*
- 11 + 1 = 12. Count twelve beads on the abacus.
- 12 + 1 = 13. Count thirteen beads on the abacus.
- 13 + 1 = 14. Count fourteen beads on the abacus.
- 14 + 1 = 15. Count fifteen beads on the abacus.
- 15 + 1 = 16. Count sixteen beads on the abacus.
- 16 + 1 = 17. Count seventeen beads on the abacus.
- 17 + 1 = 18. Count eighteen beads on the abacus.
- 18 + 1 = 19. Count nineteen beads on the abacus.
- 19 + 1 = 20. Count twenty beads on the abacus.

In this manner teach to 100.

* Strings of buttons, spools or rings may be attached to the wall strung on wire, in place of an abacus, the teacher moving the objects with the pointer as she talks.

Lesson XV.

When a number is expressed with two or more figures, the first place at the right is called units, the second tens, etc.

Thus, 32 may be read two units and three tens. Its value is $10 + 10 + 10 + 2$.

$$\begin{array}{r} 10 \\ 10 \\ 10 \\ 2 \\ \hline 32 \end{array}$$

In adding numbers, the sum of 6 and 4 or 4 and 6 always gives 0 in units place.

Copy and add the following :

4	6	14	24	16	26
<u>6</u>	<u>4</u>	<u>6</u>	<u>6</u>	<u>4</u>	<u>4</u>
4	6	14	16	4	6
<u>3</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>1</u>
3	2	3	2	5	3
<u>3</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>3</u>

(The teacher should extend these examples.)

6 and 5 or 5 and 6 always gives 1 in units place.

Copy and add the following :

5	6	15	25	16	26
<u>6</u>	<u>5</u>	<u>6</u>	<u>6</u>	<u>5</u>	<u>5</u>
6	6	6	6	5	5
<u>2</u>	<u>1</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>2</u>
3	4	2	1	3	4
<u>3</u>	<u>4</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>4</u>

Lesson. XVI.

In adding 6 and 6 gives a 2 in units place.

Copy and add :

	6		16		26	
	<u>6</u>		<u>6</u>		<u>6</u>	
6	6	6	6	6	6	
3	2	1	4	0	6	
<u>3</u>	<u>4</u>	<u>5</u>	<u>2</u>	<u>6</u>	<u>0</u>	

7 and 6 or 6 and 7 gives a 3 in units place.

Copy and add :

	7		6		16		17		26		27
	<u>6</u>		<u>7</u>		<u>7</u>		<u>6</u>		<u>7</u>		<u>6</u>
	6		7		6		7		7		7
	3		3		2		1		2		6
	<u>4</u>		<u>3</u>		<u>5</u>		<u>6</u>		<u>4</u>		<u>0</u>

Teach the pupils that a 7 and 5 always give a 2 in units place. 8 and 5 give 3. 9 and 5 give 4. 7 and 6 give 3. 8 and 6 give 4. 9 and 6 give 5. 7 and 7 give 4. 8 and 7 give 5. 9 and 7 give 6, etc., etc., giving them examples under each principle.

XI.	XII.	XIII.	XIV.	XV.
XVI.	XVII.	XVIII.	XIX.	XX.
XXX.	XL.	L.		

Lesson XVII.

0	1	2	3	4	5	6	7	8	9
	2	2	2	2	2	2	2	2	2
	2	2	2	2	2	2	2	2	2
		4	2	2	2	2	2	2	2
			6	2	2	2	2	2	2
				8	2	2	2	2	2
					10	2	2	2	3
						12	2	2	2
							14	2	2
								16	2
									18

Pupils should not be asked to memorize the multiplication table before they understand it. Train the children to observe, to tell, to do, and when old enough, to reason.

Draw on the board and oblong, divide and number it as above. Have the pupils draw one on their slates. Tell them to put as many twos in each column as the figure at the top of each says. Have them add each column. When added question as follows:

How many times did we take two here (0) column)? No times two is how many? How many times here (1 column)? One times two is how many? How many times here (2 column)? What was the sum? Two times two are how many, etc.? Then as follows: How many times did we take two here (9 column)? What was the sum? Nine twos or nine times two are how many? How many twos in eighteen? Twos in eighteen, how many, etc.?

The pupils are now prepared to memorize the table as they can do so understandingly, and in like manner other tables should be added as they advance. The pupils have no difficulty in understanding that multiplication is short addition, also that division is the opposite of multiplication.

TEST PROBLEMS.

1. How many yards of carpeting, 1 yard wide, will cover a floor 22 feet long and 12 feet wide? *Ans.* $29\frac{1}{2}$ yards.

2. How many gallons of water will a tank hold that is 22 feet long, 21 feet wide, and 10 feet deep?

Ans. 34560 gallons.

3. I sell peanuts at 8 cents a quart and double my money. What do they cost me a peck? *Ans.* 32 cents.

4. How many square feet in the floor of a room 12 feet 6 inches long, and 10 feet 8 inches wide?

Ans. $133\frac{1}{2}$ sq. ft.

5. What will 4 cwt. 3 qr. and 18 lbs. of sugar cost at \$8 per 100 pounds? *Ans.* \$39.44.

6. How many square feet in the walls of a room $14\frac{1}{2}$ feet long, 12 feet wide, and 8 feet high? *Ans.* 424 sq. ft.

7. I buy goods for \$20 and sell them for \$24. What % do I make? *Ans.* 20%.

8. What per cent of \$240 is \$12? *Ans.* 5%.

9. Find the sum of $\frac{1}{2}$ of $18 + \frac{2}{3}$ of $9 + \frac{1}{4}$ of 20.

Ans. 19.

10. From the sum of 2 tens + 8 twelves take the sum of 2 fours + 4 twos. *Ans.* 100.

11. If by working 8 days of 10 hours each, 240 pairs of boots can be made by 6 men, how many pairs of boots can be made by 15 men in 12 days, of 6 hours each?

Ans. 540 pairs.

12. For how much must I give my note so as to receive \$720 at the bank, time being 1 month and rate 6%?

Ans. \$723.98.

13. A and B go into business Jan. 1, 1883. A puts in \$800, B puts in \$900, and April 1, they take in C, who puts in \$500. They find, Jan. 1, 1884, they have gained \$1600. What amount of the gain will each man receive?

Ans. A, \$616 $\frac{2}{3}$; B, \$693 $\frac{1}{3}$; C, 289 $\frac{1}{3}$.

14. How much will it cost to plaster the walls and ceiling of a room 17 feet long, 13 feet wide, and 9 feet high, at \$7.11 per 100 square feet?

Ans. \$54.11.

15. Bought goods for \$3625 cash. For what sum must I give my note at 3 months to obtain that sum from the bank, discount at 6%?

Ans. \$3682.07.

16. What will 3 cwt. 39 lbs. of coal cost at \$7.35 per ton?

Ans. \$1.25.

17. If I buy N. O. C. R. R. stock at 80, and sell for 110, how much do I make on 40 shares, paying $\frac{1}{2}$ % brokerage each way?

Ans. \$1160.

18. What must I ask for a book that cost me 80 cents, so that I can abate 20% and still make 10%?

Ans. \$1.10.

19. Analyze: $\frac{4}{7}$ of 14 is $\frac{3}{8}$ of what number?

Ans. 32.

20. A note for \$1200, dated June 20, 1874, had payments indorsed upon it as follows:

Oct. 2, 1874, \$220.40.

Feb. 29, 1876, \$48.

May 23, 1876, \$250.50.

Dec. 11, 1876, \$226.40.

Find the balance due Jan. 21, 1877.

Ans. \$604.

21. What will it cost to carpet a floor 21 feet long and 18 feet wide, with Brussels carpeting, $\frac{3}{4}$ of a yard wide, worth \$1.10 per yard?

Ans. \$61.60.

22. A man sold 2 cows for \$60 each. On one he gained 20%, on the other he lost 20%. Did he gain or lose money, and how much?

Ans. Lost \$5.

23. What is the difference between the true and bank discount on \$5000 for 1 year 3 days at 6%?

Ans. \$19.76.

24. What will it cost to paint the walls of a room 36 feet by 24, and 11 feet high, at $\$1.37\frac{1}{2}$ per square yard?

Ans. \$201.67.

25. A boy sold chestnuts at 10 cents a gill, and made a profit of 150%. What did they cost him a peck?

Ans. \$2.56.

26. A town wishes to raise \$58000 to build a bridge and town hall. The real estate of the town is valued at \$5,333,333 $\frac{1}{3}$. The personal property at \$2,666,666 $\frac{2}{3}$. There are 5000 polls, each to be taxed 40 cents. What will be A's tax, who pays 1 poll and whose property is valued at \$3500?

Ans. \$24.90.

27. I have a horse for which I ask \$240 cash. Do I make or lose money by taking a note for \$250.51 without interest for 8 months, money being worth 6%? *Ans.* Make \$.875.

28. What will it cost to dig a cellar 27 by 60 feet, and 10 feet deep, at \$.75 per load?

Ans. \$450.

29. I have a horse for which I ask \$240 cash. If I sell him for a note for \$300, payable at a bank in 2 years, do I make or lose money, and how much? *Ans.* Make \$23.85.

30. Wm. Brown bought a horse for \$320, which was 20% less than his real value, and sold him for 30% more than his real value. How much more did he receive for the horse than he paid for him?

Ans. \$200.

31. I sell Mr. Smith a cow for \$644 cash. He gives me his note for \$642 for 1 year 2 months without interest, and the rest in cash. How much cash does he pay me? Money is worth 6%.

Ans. \$44.

32. If I ask a man \$465 cash for a city lot and take his note for \$501.075, payable at the bank in 1 year, 2 months, 3 days, do I make or lose money? How much? *Ans.* Gain \$.50.

33. I buy a horse of Mr. White for \$597. For how much must I give my note for 27 days, payable at the Union Bank, to discharge the debt?

Ans. \$600.

34. I send my agent \$8040 to buy apples at \$5 per bbl. How many bbls. can he buy, his commission being $\frac{1}{2}\%$?

Ans. 1600 bbls.

35. I send my agent 400 bbls. of flour, worth \$5 per bbl. How much money should he return me, his commission being $\frac{1}{2}\%$?

Ans. \$1990.

36. Mr. White pays me \$105 interest. His note has been running 2 years 4 months. How much did I lend him?

Ans. \$750.

37. Analyze. If a post stands $\frac{1}{4}$ in the mud, $\frac{1}{4}$ in the water, and 22 feet out of the water, what is the length of the post?

Ans. 40 feet.

38. I sold goods for \$242.50 and lost 3%. What % would I have gained had I sold for \$262.50?

Ans. 5%.

39. If 6 men in 4 days working 10 hours a day, can reap 16 acres, in how many days can 10 men, working 12 hours a day, reap 24 acres?

Ans. 3 days.

40. A and B go into business Jan. 1, 1882. A puts in \$800, B puts in \$600. May 1, 1882, they take in C, who puts in \$1000. At the end of the year they find they have made profits amounting to \$2000. What should each man receive?

Ans. A, $774\frac{2}{3}$; B, $580\frac{2}{3}$; C, $645\frac{1}{3}$.

41. What will it cost to paint the floor and walls of a room 20 feet long, 15 feet wide, and $9\frac{1}{2}$ feet high, at \$10.25 per 100 square feet?

Ans. \$96.76.

42. Bought goods for \$824 cash, but gave a note payable in 60 days at 8% bank discount. What was the face of the note?

Ans. \$835.70.

43. What will be the cost of 2 cwt. 40 lbs. of coal at \$6.40 a ton?

Ans. \$.768.

44. Brown is asking a cash price of \$5 per bbl. for apples. How many bbls. can I buy with a note for \$353.60, payable in 1 year 6 months without interest, money being worth 7%?

Ans. 64 bbls.

45. Buy R. R. stock at $95\frac{1}{2}$ and sell for 101. What is my gain on 30 shares, brokerage each way being $\frac{1}{4}\%$?

Ans. \$150.

46. Send my agent \$1255.62 to buy prints at 9 cents a yard. If his commission is 2%, how many yards can he buy?

Ans. $13677\frac{1}{2}$ yards.

47. I pay \$9 for hats, what must I ask for them so as to abate 10% and make 50%?

Ans. \$15.

48. Analyze: $\frac{3}{4}$ of 12 is $\frac{4}{5}$ of what number? *Ans.* 14.

49. A note given Jan. 1, 1841, for \$8500 at 6%, was indorsed as follows:

July 1, 1841, \$1006.20.

Dec. 1, 1841, \$152.80.

Aug. 13, 1842, \$1757.50.

What was due Jan. 1, 1843?

Ans. \$6503.80.

NOTE.—By taking one-half of \$8500 and one-half of each payment, a new example may be given, the answer being just one-half. Or each may be multiplied by any number, thus making a number of examples.

50. How much will it cost to carpet a parlor 18 feet square, with carpeting $\frac{3}{4}$ yard wide, which is worth \$1.50 per yard?

Ans. \$72.

51. A man sold two coats for \$40 each. On one he gained 20%, on the other he lost 20%. Did he gain or lose, and how much?

Ans. \$3.33 lost.

52. What is the difference between the true and bank discount on \$968.80 for 3 years, 6 months, 6 days, at 6%?

Ans. \$36.10.

53. If a room is 20 feet square and 10 feet high, what will it cost to paper its walls and ceiling at 60 cents per square yard?

Ans. \$80.

54. By selling peanuts at 15 cents a quart, I make 200%. What did they cost me a bushel?

Ans. \$1.60.

55. A village desires to build a hall worth \$8000. The valuation of the real estate is \$600,000, the personal property is \$150,000. There are 250 polls at \$2 each. What will be A's tax, who is said to be worth \$5000 and who pays one poll?

Ans. \$52.

56. A sold B a watch for \$50 and gained 400%. What did the watches cost A a gross?

Ans. \$1440.

57. What will it cost to paint the walls, ceilings, and floor of a room 33 feet long, 8 feet high, $22\frac{1}{2}$ feet wide, at 60 cents per square yard?

Ans. \$158.20.

58. Two boys, John and William, each had \$650. John took a man's note for his for 2 years 4 months at 6%. William also took a note for his for the same time, but received compound interest. Which received the most interest, William or John, and how much?

Ans. William, \$3.95.

59. What will it cost to dig a cellar 22 feet by 20 feet and 8 feet deep (there being also a bay window 6 feet by 8), at \$1.00 a load?

Ans. \$144 $\frac{1}{4}$.

60. How much must I pay for a carpet for a floor 21 feet by 18 feet, if the carpet is $\frac{3}{4}$ of a yard wide and is worth \$1.20 a yard?

Ans. \$67.20.

61. I have some spoons made to order, each spoon to weigh 1 oz. Avoirdupois. What will they cost me at 60 cents each, if they use 1 lb. 9 oz. 17 pwt. 12 gr. Troy in making them?

Ans. \$14.40.

62. I buy a 1 pound bar of alloyed gold, Avoirdupois, for \$175, and have it made into rings, each weighing $3\frac{1}{2}$ pwt. How much % do I make on my money, if I sell the rings at \$4 each?

Ans. 100%.

63. I lent A \$360, and at the end of 2 years and 3 months he paid me \$48.60 interest. What rate of interest did he pay me?

Ans. 6%.

64. 256 is 32% of a certain number. What is the number?

Ans. 800.

65. A stick is $\frac{1}{10}$ of its length in mud, $\frac{1}{4}$ in water, and 21 feet out of the water. How long is the stick?

Ans. 30 feet.

66. I send my agent in Chicago \$3421.50 to buy wheat at \$.50 a bushel. How many bushels can he buy, his commission being 3%?

Ans. 6643 $\frac{1}{3}$ bushels.

67. If I send my agent 5648 bushels of corn worth \$4250, how much money should he send me, his commission being 3%?

Ans. \$4122.50.

68. Find the sum of $\frac{1}{4}$ of 48 + $\frac{1}{3}$ of 18 + $\frac{2}{5}$ of 49 + 5 fives + 2 threes + 25.

Ans. 119.

69. $\frac{1}{2}$ of 20 + $\frac{1}{3}$ of 60 is 4% of what number?

Ans. 750.

70. By selling chestnuts at 14 cents a quart I double my money. What do they cost me a bushel?

Ans. \$2.24.

71. I pay 36 cents for a peck and a half of salt. How much is that a quart?

Ans. 3 cents.

72. I buy 50 shares of R. R. stock at 93 and sell it for 104. What do I make, brokerage being $\frac{1}{2}$ % for buying, and $\frac{3}{4}$ % for selling.

Ans. \$487.50.

73. If a man get \$2 for cutting a cord of wood in 3 lengths, how much should he receive for cutting it in 4 lengths?

Ans. \$3.

74. If sugar is worth 8 $\frac{1}{2}$ cents a pound, how many pounds must be given for \$1?

Ans. 11 $\frac{1}{3}$.

75. What will it cost to paint two boxes, each side of one being 3 feet square, and each side of the other being 3 square feet, a 5 cents a square foot?

Ans. \$2.70 and 90 cents.

76. The water in a tank 4 feet square is 2 feet 6 inches deep. How many gallons is that?

Ans. 299 $\frac{5}{8}$ gals.

LIBRARY AND MISCELLANEOUS PUBLICATIONS.

TEACHERS' WORKING LIBRARY.

Object Lessons. Welch.

This is a complete exposition of the popular modern system of "object-teaching," for teachers of primary classes.

Theory and Practice of Teaching. Page.

This volume has, without doubt, been read by two hundred thousand teachers, and its popularity remains undiminished, large editions being exhausted yearly. It was the pioneer, as it is now the patriarch, of professional works for teachers.

The Graded School. Wells.

The proper way to organize graded schools is here illustrated. The author has availed himself of the best elements of the several systems prevalent in Boston, New York, Philadelphia, Cincinnati, St. Louis, and other cities.

The Normal. Holbrook.

Carries a working school on its visit to teachers, showing the most approved methods of teaching all the common branches, including the technicalities, explanations, demonstrations, and definitions introductory and peculiar to each branch.

School Management. Holbrook.

Treating of the teacher's qualifications; how to overcome difficulties in self and others; organization; discipline; methods of inciting diligence and order; strategy in management; object-teaching.

The Teachers' Institute. Fowle.

This is a volume of suggestions inspired by the author's experience at institutes, in the instruction of young teachers. A thousand points of interest to this class are most satisfactorily dealt with.

Schools and Schoolmasters. Dickens.

Appropriate selections from the writings of the great novelist.

The Metric System. Davies.

Considered with reference to its general introduction, and embracing the views of John Quincy Adams and Sir John Herschel.

The Student; The Educator. Phelps. 2 vols.

The Discipline of Life. Phelps.

The authorship of these works is one of the most distinguished writers on education, and they cannot fail to prove a valuable addition to the School and Teachers' Libraries, being in a high degree both interesting and instructive.

Law of Public Schools. Burke.

By Finley Burke, Counsellor-at-Law. A new volume in "Barnes's Teachers' Library Series." 12mo, cloth.

"Mr. Burke has given us the latest expositions of the law on this highly important subject. I shall cordially commend his treatise."—THEODORE DWIGHT, LL.D.

From the HON. JOSEPH M. BECK, Judge of Supreme Court, Iowa.

"I have examined with considerable care the manuscript of 'A Treatise on the

Law of Public Schools,' by Finley Burke, Esq., of Council Bluffs. In my opinion, the work will be of great value to school teachers and school officers, and to lawyers. The subjects treated of are thoughtfully considered and thoroughly examined, and correctly and systematically arranged. The style is perspicuous. The legal doctrines of the work, so far as I have been

THE NATIONAL SERIES OF STANDARD MISCELLANY.

MISCELLANEOUS PUBLICATIONS — *Continued.*

able to consider them, are sound. I have examined quite a number of the authorities cited; they sustain the rules announced in the text. Mr. Burke is an able and industrious member of the bar of the Supreme Court of this State, and has a high standing in the profession of the law."

"I fully concur in the opinion of Judge Beck, above expressed." — JOHN F. DILLON. *New York, May, 1880.*

SIOUX CITY, Iowa, May, 1880.
I have examined the manuscript of Finley Burke, Esq., and find a full citation of all the cases and decisions pertaining to the school law, occurring in the courts of the United States. This volume contains

valuable and important information concerning school law, which has never before been accessible to either teacher or school officer.

A. ARMSTRONG,
Supt. Schools, Sioux City, Iowa.

DES MOINES, May 15, 1880.

The examination of "A Treatise on the Law of Public Schools," prepared by Finley Burke, Esq., of Council Bluffs, has given me much pleasure. So far as I know, there is no work of similar character now in existence. I think such a work will be exceedingly useful to lawyers, school officers, and teachers, and I hope that it may find its way into their hands.

G. W. VON COELLY,
Supt. Public Inst. for Iowa.

Teachers' Handbook. Phelps.

By William F. Phelps, Principal of Minnesota State Normal School. Embracing the objects, history, organization, and management of teachers' institutes, followed by methods of teaching, in detail, for all the fundamental branches. Every young teacher, every practical teacher, every experienced teacher even, needs this book.

From the New York Tribune.

"The discipline of the school should prepare the child for the discipline of life. The country schoolmaster, accordingly, holds a position of vital interest to the destiny of the republic, and should neglect no means for the wise and efficient discharge of his significant functions.

This is the key-note of the present excellent volume. In view of the supreme importance of the teacher's calling, Mr. Phelps has presented an elaborate system of instruction in the elements of learning, with a complete detail of methods and processes, illustrated with an abundance of practical examples and enforced by judicious councils."

Topical Course of Study. Stone.

This volume is a compilation from the courses of study of our most successful public schools, and the best thought of leading educators. The pupil is enabled to make full use of any and all text-books bearing on the given topics, and is incited to use all other information within his reach.

American Education. Mansfield.

A treatise on the principles and elements of education, as practised in this country, with ideas towards distinctive republican and Christian education.

American Institutions. De Tocqueville.

A valuable index to the genius of our Government.

Universal Education. Mayhew.

The subject is approached with the clear, keen perception of one who has observed its necessity, and realized its feasibility and expediency alike. The redeeming and elevating power of improved common schools constitutes the inspiration of the volume.

Oral Training Lessons. Barnard.

The object of this very useful work is to furnish material for instructors to impart orally to their classes, in branches not usually taught in common schools, embracing all departments of natural science and much general knowledge.

Lectures on Natural History. Chadbourne.

Affording many themes for oral instruction in this interesting science, especially in schools where it is not pursued as a class exercise.

MISCELLANEOUS PUBLICATIONS—*Continued.*

Outlines of Mathematical Science. Davies.

A manual suggesting the best methods of presenting mathematical instruction on the part of the teacher, with that comprehensive view of the whole which is necessary to the intelligent treatment of a part, in science.

Nature and Utility of Mathematics. Davies.

An elaborate and lucid exposition of the principles which lie at the foundation of pure mathematics, with a highly ingenious application of their results to the development of the essential idea of the different branches of the science.

Mathematical Dictionary. Davies and Peck.

This cyclopædia of mathematical science defines, with completeness, precision, and accuracy, every technical term; thus constituting a popular treatise on each branch, and a general view of the whole subject.

The Popular Educator. Barnes.

In seven volumes, containing interesting and profitable educational miscellany.

Liberal Education of Women. Orton.

Treats of "the demand and the method;" being a compilation of the best and most advanced thought on this subject, by the leading writers and educators in England and America. Edited by a professor in Vassar College.

Education Abroad. Northrop.

A thorough discussion of the advantages and disadvantages of sending American children to Europe to be educated; also, papers on legal prevention of illiteracy, study, and health, labor as an educator, and other kindred subjects.

The Teacher and the Parent. Northend.

A treatise upon common-school education, designed to lead teachers to view their calling in its true light, and to stimulate them to fidelity.

The Teachers' Assistant. Northend.

A natural continuation of the author's previous work, more directly calculated for daily use in the administration of school discipline and instruction.

School Government. Jewell.

Full of advanced ideas on the subject which its title indicates. The criticisms upon current theories of punishment and schemes of administration have excited general attention and comment.

Grammatical Diagrams. Jewell.

The diagram system of teaching grammar explained, defended, and improved. The curious in literature, the searcher for truth, those interested in new inventions, as well as the disciples of Professor Clark, who would see their favorite theory fairly treated, all want this book. There are many who would like to be made familiar with this system before risking its use in a class. The opportunity is here afforded.

The Complete Examiner. Stone.

Consists of a series of questions on every English branch of school and academic instruction, with reference to a given page or article of leading text-books where the answer may be found in full. Prepared to aid teachers in securing certificates, pupils in preparing for promotion, and teachers in selecting review questions.

How Not to Teach. Griffin.

This book meets a want universally felt among young teachers who have their experience in teaching to learn. It undertakes to point out the many natural mistakes into which teachers, unconsciously or otherwise, fall, and warns the reader against dangers that beset the path of every conscientious teacher. It tells the reader, also, the proper and acceptable way to teach, illustrating the author's ideas by some practice-lessons in arithmetic (after Grube).

THE NATIONAL SERIES OF STANDARD MISCELLANY,

MISCELLANEOUS PUBLICATIONS — *Continued.*

School Amusements. Root.

To assist teachers in making the school interesting, with hints upon the management of the school-room. Rules for military and gymnastic exercises are included. Illustrated by diagrams.

Institute Lectures. Bates.

These lectures, originally delivered before institutes, are based upon various topics in the departments of mental and moral culture. The volume is calculated to prepare the will, awaken the inquiry, and stimulate the thought of the zealous teacher.

Method of Teachers' Institutes. Bates.

Sets forth the best method of conducting institutes, with a detailed account of the object, organization, plan of instruction, and true theory of education on which such instruction should be based.

History and Progress of Education.

The systems of education prevailing in all nations and ages, the gradual advance to the present time, and the bearing of the past upon the present, in this regard, are worthy of the careful investigation of all concerned in education.

Higher Education. Atlas Series.

A collection of valuable essays. **CONTENTS.** International Communication by Language, by Philip Gilbert Hamerton; Reform in Higher Education; Upper Schools, by President James McCosh; Study of Greek and Latin Classics, by Prof. Charles Elliott; The University System in Italy, by Prof. Angelo de Gubernatis, of the University of Florence; Universal Education, by Ray Palmer; Industrial Art Education, by Eaton S. Dronc.

LIBRARY OF LITERATURE.

Milton's Paradise Lost. (Boyd's Illustrated Edition.)

Young's Night Thoughts. do.

Cowper's Task, Table Talk, &c. do.

Thomson's Seasons. do.

Pollok's Course of Time. do.

These works, models of the best and purest literature, are beautifully illustrated, and notes explain all doubtful meanings.

Lord Bacon's Essays. (Boyd's Edition.)

Another grand English classic, affording the highest example of purity in language and style.

The Iliad of Homer. (Translated by Pope.)

Those who are unable to read this greatest of ancient writers in the original should not fail to avail themselves of this standard metrical version.

Pope's Essay on Man.

This is a model of pure classical English, which should be read, also, by every teacher and scholar for the sound thought it contains.

Improvement of the Mind. Isaac Watts.

No mental philosophy was ever written which is so comprehensive and practically useful to the unlearned as well as learned reader as this well-known book of Watts.

Milton's Political Works. Cleveland.

This is the very best edition of the great poet. It includes a life of the author, notes, dissertations on each poem, a faultless text, and is the *only* edition of Milton with a complete verbal index.

MISCELLANEOUS PUBLICATIONS—*Continued.*

Compendium of English Literature. Cleveland.

English Literature of XIXth Century. Cleveland.

Compendium of American Literature. Cleveland.

Nearly one hundred and fifty thousand volumes of Professor Cleveland's inimitable compendiums have been sold. Taken together they present a complete view of literature. To the man who can afford but a few books these will supply the place of an extensive library. From commendations of the very highest authorities the following extracts will give some idea of the enthusiasm with which the works are regarded by scholars:—

"With the Bible and your volumes one might leave libraries without very painful regret." "The work cannot be found from which in the same limits so much interesting and valuable information may be obtained." "Good taste, fine scholarship, familiar acquaintance with literature, unwearied industry, tact acquired by practice, an interest in the culture of the young, and regard for truth, purity, philanthropy, and religion are united in Mr. Cleveland." "A judgment clear and impartial, a taste at once delicate and severe." "The biographies are just and discriminating." "An admirable bird's-eye view." "Acquaints the reader with the characteristic method, tone, and quality of each writer." "Succinct, carefully written, and wonderfully comprehensive in detail," &c., &c.

THE TEACHER'S READING CIRCLE.

"No movement of modern times, rapid and startling as have been the changes in school methods, has ever made such simple and economical provisions for self-improvement among teachers, or promises such wide usefulness."—*The Educational Weekly.*

"A better indication of progress even than the improvement and increasing number of educational journals, is the formation of Teachers' Reading Circles. More may be confidently expected from these associations than from any other educational movement ever started in this country."—*The Practical Teacher.*

Among the leading publications selected for the Teachers' Reading Circles are the following:—

Barnes's Brief General History of the World.

From H. M. SKINNER, Sec'y Indiana Reading Circle Board: "It would not be asserting too much to say that if an author thoroughly competent had undertaken the preparation of a book expressly for the Reading Circle, — a book intended to impart general information and to encourage a taste for reading, — a work better adapted to the Reading Circle needs than Barnes's General History would hardly have been possible."

Page's Theory and Practice of Teaching. (New Ed.)

This volume has without doubt been read by several hundred thousand teachers, and its popularity remains undiminished — large editions being exhausted yearly. It was the pioneer, as it is now the patriarch, of professional works for teachers.

Watts's Improvement of the Mind. (New Edition.)

The ablest production of one of the most eminent writers of the English language. The amount of practical wisdom contained within its two hundred pages has challenged the admiration of the wisest of the two hemispheres for more than a century. This book should be carefully read and digested by every teacher and advanced student.

Hygiene for Young People.

Steele's Hygienic Physiology.

These books are of unsurpassed excellence. The text of each is brought fully up to the level of the New Physiological views, and the subjects are treated with special reference "to the effects of alcoholic drinks, stimulants, and narcotics upon the human system." They are essential to every well-regulated teacher's library.

LIBRARY OF HISTORY.

Ancient and Mediæval Republics. Mann.

A review of their institutions, and of the causes of their decline and fall. By Henry Mann. 8vo. 584 pages. cloth.

Outlines of General History. Gilman.

The number of facts which the author has compressed into these outline sketches is really surprising; the chapters on the Middle Ages and feudalism afford striking examples of his power of succinct but comprehensive statement. In his choice of representative periods and events in the histories of nations he shows very sound judgment, and his characterization of conspicuous historical figures is accurate and impartial.

Great Events of History. Collier.

This celebrated work, edited for American readers by Prof. O. R. Willis, gives, in a series of pictures, a pleasantly readable and easily remembered view of the Christian era. Each chapter is headed by its central point of interest to afford association for the mind. Delineations of life and manners at different periods are interwoven. A geographical appendix of great value is added.

History of England. Lancaster.

An arrangement of the essential facts of English history in the briefest manner consistent with clearness. With a fine map.

A Critical History of the Civil War. Mahan.

By Asa Mahan, LL.D., author of "Intellectual Philosophy," "Elements of Logic," &c. First president of Oberlin College, Ohio. With an introductory letter by Lieut.-Gen. M. W. Smith of the British army. 8vo. 450 pages. Cloth.

The plan of this work is to present, not the causes and details of facts which led to the war, but the conduct and management of the war on the part of those concerned. It is a matter of present and future importance to Americans to know not only how the war was conducted, but also how it might have been more successfully carried on. The author has made the science of war a subject of careful and protracted study, and his views are pronounced and scientific. He takes strong ground, writes with vigor, and the interest of the reader is fully sustained from the beginning to the close of the book. His conclusions have already passed into history, and this work will be regarded as one of the most important contributions to the literature of the subject.

Europe under Napoleon First. Alison.

A history of Europe from 1789 to 1815. By Archibald Alison. Abridged by Edward S. Gould. 1 vol. 8vo, with appendix, questions, and maps. 550 pages.

"One of the best abridgments I ever saw. The material facts are all retained, and Mr. Gould has displayed great industry and skill in preserving the substance of so great a history."—CHANCELLOR JAMES KENT.

"It seems to me an excellent abridgment. . . . Written in clear and chaste style, presenting the narrative in exact form for the general reader. . . ."—JUDGE JOSEPH STORY.

History of Rome. Ricord.

An entertaining narrative for the young. Illustrated. Embracing successively, The Kings, The Republic, The Empire.

History of the Ancient Hebrews. Mills.

The record of "God's people" from the call of Abraham to the destruction of Jerusalem; gathered from sources sacred and profane.

The Mexican War. Mansfield.

A history of its origin, and a detailed account of its victories; with official despatches, the treaty of peace, and valuable tables. Illustrated.

MISCELLANEOUS PUBLICATIONS — *Continued.*

Early History of Michigan. Sheldon.

A work of value and deep interest to the people of the West. Compiled under the supervision of Hon. Lewis Cass. Portraits.

History of Texas. Baker.

A pithy and interesting résumé. Copiously illustrated. The State constitution and extracts from the speeches and writings of eminent Texans are appended.

Magazine of American History.

8 volumes. Illustrated. A collection of valuable data relating to American History.

Points of History.

For schools and colleges. By John Lord, LL.D., author of "Old Roman World," "Modern History," &c.

Barnes's Popular History of the United States. 1 vol.

This superbly illustrated work is by the author of "Barnes's Brief Histories" (for schools). The leading idea is to make American history *popular* for the masses, and especially with the young. The style is therefore life-like and vivid, carrying the reader along by the sweep of the story as in a novel, so that when he begins an account of an important event he cannot very well lay down the book until he finishes. It is complete from the earliest times to date.

"Barnes's Popular History of the United States" was undertaken at the close of the first hundred years of American Independence. The author proposed to give to the whole people of the United States and the world a thoroughly impartial history of America, from the mound-builders to the present time. As such it was necessary to steer free from whatever in recent history would arouse sectional animosity or party bitterness. He determined to meet all questions of burning moment in the judicial rather than controversial spirit, and while giving to every event its due importance, he would seek to avoid controversy by the gentle word "that turneth away wrath." The work is now finished down to President Arthur's administration. In it the truth of American history is impartially given in true historic form, without fear or favor. It is a work that all sections of the country can read and enjoy. Although the author is a Northern man and soldier, his work is popular and widely used as a text-book East, West, North, and South. An Alabama teacher lately wrote as follows: "We are using your history and like it, though it does n't favor us rebels." And so it is liked throughout the country, because it does n't favor any side at the expense of truth and justice. Instead of being spread out in many volumes, more or less didactic, statistical, or dry, the book is complete in one royal 8vo volume of 850 pages, with 14 full-page steel engravings and 320 text illustrations on wood, engraved by eminent artists. It is fully up to the times and includes an account of President Garfield's brief administration and tragic death, and General Grant's funeral.

Mrs. Martha J. Lamb's History of New York City.

2 vols., cloth.

This is a complete survey of the history of New York from early settlement to the present time. It opens with a brief outline of the condition of the Old World prior to the settlement of the New, and proceeds to give a careful analysis of the two, great Dutch Commercial Corporations to which New York owes its origin. It sketches the rise and growth of the little colony on Manhattan Island; describes the Indian wars with which it was afflicted; gives color and life to its Dutch rulers; paints its subjugation by the English, its after vicissitudes, the Revolution of 1689; in short, it leads the reader through one continuous chain of events down to the American Revolution. Then, gathering up the threads, the author gives an artistic and comprehensive account of the progress of the city, in extent, education, culture, literature, art, and political and commercial importance during the last century. Prominent persons are introduced in all the different periods, with choice bits of family history, and glimpses of social life. The work contains maps of the city in the different decades, and several rare

MISCELLANEOUS PUBLICATIONS—Continued.

portraits from original paintings, which have never before been engraved. The illustrations, about 320 in number, are all of an interesting and highly artistic character.

"Widely welcomed both for its abundant stores of information and the attractions of the narrative."—*New York Tribune*.

"There is warmth and color and life in every passage."—*New York Sun*.

"The work has been done faithfully and picturesquely."—*The Nation*.

Carrington's Battles of the Revolution.

A careful description and analysis of every engagement of the War for Independence, with topographical charts prepared from personal surveys by the author, a veteran officer of the United States army, and Professor of Military Science in Wabash College.

Baker's Texas Scrap-Book.

Comprising the history, biography, literature, and miscellany of Texas and its people. A valuable collection of material, anecdotal and statistical, which is not to be found in any other form. The work is handsomely illustrated.

DICTIONARIES AND ENCYCLOPÆDIAS.

Home Cyclopædia of Literature and Fine Arts.

Index to terms employed in belles-lettres, philosophy, theology, law, mythology, painting, music, sculpture, architecture, and all kindred arts. By Geo. Ripley and Chas. A. Dana.

The Rhyming Dictionary. Walker.

A serviceable manual to composers, being a complete index of allowable rhymes.

Dictionary of Synonyms ; or, The Topical Lexicon. Williams.

Terms of the English language *classified by subjects* and arranged according to their affinities of meaning, with etymologies, definitions, and illustrations. A very entertaining and instructive work.

Hawaiian Dictionary.

Mathematical Dictionary. Davies and Peck.

A thorough compendium of the science, with illustrations and definitions.

Kwong's Dictionary.

A dictionary of English phrases. With illustrative sentences. With collections of English and Chinese proverbs, translations of Latin and French phrases, historical sketch of the Chinese Empire, a chronological list of the Chinese dynasties, brief biographical sketches of Confucius and of Jesus, and complete index. By Kwong Ki Chiu, late member of the Chinese Educational Mission in the United States, and formerly principal teacher of English in the Government School at Shanghai, China. 900 pages, 8vo, cloth.

From the Hartford Courant.

"The volume shows great industry and apprehension of our language, and is one of the most curious and interesting of linguistic works."

From the New York Nation.

"It will amaze the sand-lot gentry to be informed that this remarkable work will supplement our English dictionaries even for native Americans."

BARNES'S LIBRARY OF BIOGRAPHY.

The Life of President Garfield,

From Birth to Presidency, by Major J. M. Bundy, editor New York "Evening Mail-Express." From Mentor to Elberon, by Col. A. F. Rockwell. Oration and Eulogy, by Hon. James G. Blaine.

This life of our martyred President, by Major Bundy, Mr. Blaine, and Colonel Rockwell.

MISCELLANEOUS PUBLICATIONS—Continued.

who was with the President before and after the assassination, is the most correct and authentic. Major Bundy visited General Garfield at Mentor, by invitation, and received all the facts relating to his life to the day of his nomination, from the General's lips. This history of his life was completed by Colonel A. F. Rockwell and Hon. James G. Blaine.

The Autobiography of Rev. Chas. G. Finney,

The revivalist preacher and first president of Oberlin College. With steel portrait. Edited by Pres. J. H. Fairchild, of Oberlin. Dr. Finney was the greatest and most successful evangelist of modern times. His labors extended not only throughout a large territory in the United States, but in Great Britain and Ireland, and he produced a most powerful impression. This memoir describes the scenes he passed through in the most vivid language, and covers the entire period of his life, from the time of his conversion to the close of his career.

Memoirs of P. P. Bliss.

With steel portrait of Mr. and Mrs. Bliss and two children. By Major D. W. Whittle. With a complete collection of Mr. Bliss's tunes and hymns, many of which are here published for the first time. Containing also contributions by Mr. Moody, Mr. Sankey, Dr. Goodwin, and others.

The Life and Speeches of Henry Clay.

New edition. Complete in one volume. Compiled and edited by Daniel Mallory. 1,325 pages, 8vo, cloth, steel plates, portraits, and other illustrations.

This is the best life of Henry Clay. It contains a full sketch of his life and all his speeches, — his most important speeches in full and his less important ones in part. It also contains an epitome of the Compromise Measures, the Obituary Addresses and Eulogies by Senators Underwood, Cass, Hunter, Hall, Clemens, Cooper, Jones, of Iowa, and Brooke; and Representatives Breckenridge, Ewing, Caskie, Chandler, of Pennsylvania, Bayley, Venable, Haven, Brooks, of New York, Faulkner, of Virginia, Parker, Gentry, Bowie, and Walsh. Also the funeral sermon, by the Rev. C. M. Butler, Chaplain of the Senate, and various important correspondence not elsewhere published.

Henry Clay's Last Years. Colton.

Garibaldi's Autobiography.

From his birth to his retirement at Caprera; including the most eventful period of his life. Translated from manuscript by Theodore Dwight, author of "A Tour in Italy," and "The Roman Republic." Embellished with portrait engraved on steel.

The Life and Services of Lieut.-Gen. Winfield Scott,

Including his brilliant achievements in the War of 1812 and in the Mexican War, and the part played by him at the opening of the Civil War of 1862. By Edward D. Mansfield, LL.D. 12mo, cloth, illustrated. 550 pages.

Lives of the Signers. Dwight.

The memory of the noble men who declared our country free, at the peril of their own "lives, fortunes, and sacred honor," should be enshrined in every American's heart.

Life of Sir Joshua Reynolds. Cunningham.

A candid, truthful, and appreciative memoir of the great painter, with a compilation of his discourses. The volume is a text-book for artists, as well as those who would acquire the rudiments of art. With a portrait.

Biography of Ezra Cornell,

Founder of Cornell University. A filial tribute. By his son, Hon. A. B. Cornell, late Governor of the State of New York.

From the Nation.

"Mr. A. B. Cornell, as the biographer of his father, has had opportunities such as are given to few sons who undertake similar tasks. The material of a singularly noble, useful life was before him,

and there was nothing to be apologized for or glossed over."

From the New York Times.

"Ezra Cornell, the man, was a person more to be esteemed and remembered than Ezra Cornell, the millionaire."

MISCELLANEOUS PUBLICATIONS — *Continued.*

Prison Life.

Interesting Biographies of celebrated prisoners and martyrs, designed especially for the instruction and cultivation of youth.

Men of Mark.

Bryant, Longfellow, Poe, Charles Tennyson Turner, Macanlay, Freeman, Curtiss, George Ticknor, Sumner, John Stuart Mill. By Edwin P. Whipple, Edward A. Freeman, and others. 275 pages, 8vo, paper covers.

Autobiography of Havilah Mowry, Jr.

A city missionary sixty years in the harness.

BARNES'S LIBRARY OF TRAVEL.

Silliman's Gallop through America ;

Or, Sketches of American Scenes and Military Adventure. By Augustus E. Silliman.

It is a most agreeable volume, and we commend it to the lovers of the "sparkling" style of literature. It carries the reader through and past many of the spots, North and South, made memorable by events of the Revolution and the War of 1812.

Texas: the Coming Empire. McDaniel and Taylor.

Narrative of a two-thousand-mile trip on horseback through the Lone Star State; with lively descriptions of people, scenery, and resources.

Life in the Sandwich Islands. Cheever.

The "heart of the Pacific, as it was and is," shows most vividly the contrast between the depth of degradation and barbarism and the light and liberty of civilization, so rapidly realized in these islands under the humanizing influence of the Christian religion. Illustrated.

The Republic of Liberia. Stockwell.

This volume treats of the geography, climate, soil, and productions of this interesting country on the coast of Africa, with a history of its early settlement. Our colored citizens especially, from whom the founders of the new State went forth, should read Mr. Stockwell's account of it.

Discoveries in Nineveh and Babylon.

With 20 illustrations and a complete index. By Austen H. Layard, M. P. Abridged edition. 550 pages, 12mo, cloth.

BARNES'S BUSINESS COURSE.

Ward's Letter-Writing and Business Forms.

Letter-writing, Bills, Receipts, Accounts, Checks, Notes, and all Commercial forms are given for practice.

Powers's Practical Book-keeping.

This work is designed to impart instruction upon the science of accounts, as applied to mercantile business.

Folsom's Logical Book-keeping.

This treatise embraces interesting and important discoveries which elucidate the thirteen results of business.

Smith and Martin's Book-keeping.

By a practical teacher and a practical book-keeper.

Cocker's Hand-book of Punctuation.

With instructions for capitalization, letter writing, and proof-reading.

Eames's Light-Line Short-Hand.

This book presents a practical phonetic system, without shading.

MISCELLANEOUS PUBLICATIONS—*Continued.*

The Seasons.

By James Thomson. With four steel-plate illustrations, opinions of distinguished critics on the genius and character of the work, explanatory notes by the editor, and a complete index. Edited by James R. Boyd. 336 pages, 12mo, cloth.

The Poetical Works of John Milton.

With a life of the author, preliminary dissertation on each poem, notes, critical and explanatory, an index to the subjects of *Paradise Lost*, and an extra index to all the poems. Complete in one volume. By Charles Dexter Cleveland. 690 pages, 12mo, half roan.

Elements of Criticism.

By Henry Home, of Kames, one of the Lords Commissioners of Judiciary in Scotland. Edited, with explanatory notes, by James R. Boyd. 486 pages, 12mo, cloth.

The Plays of Philip Massinger.

With an introduction and notes, critical and explanatory. By William Gifford. Complete in one volume. 540 pages, large 8vo, cloth.

The Life of Samuel Johnson, LL.D.

By James Boswell. With copious notes and biographical illustrations. By Ed. Malone. Complete in one volume. 600 pages, 8vo, cloth.

An Essay on Man.

By Alexander Pope. With notes. Edited by a teacher. 44 pages, 12mo.

The Iliad of Homer.

Translated in verse. By Alexander Pope. 568 pages, 32mo, roan.

Improvement of the Mind.

By Isaac Watts, D.D. With Denham's Questions. 304 pages, 12mo, half bound.

The Same. Edited by S. N. Fellows.

Dr. Stephen N. Fellows, of the Iowa University, has prepared an edition of this work which is intended, if that may be, to restore the work to its place as an active instrument of the education of youth. The changes made are chiefly the elimination of matters too strictly belonging to the province of theology, and matters out of date.

BARNES' LIBRARY OF POLITICS.

First Lessons in Civil Government.

280 pages, 12mo, cloth. Based upon the laws of New York State but adapted to the requirements of the student in any State. Revised in 1877. By Andrew W. Young.

Civil Government in the United States.

330 pages, 12mo, cloth. Containing a full statement of general principles on a comprehensive plan, embracing State, county, city, town, and federal organizations. This work traces the development of free institutions from germs in the early English constitution, through colonial and revolutionary history, down to date. It is arranged topically to assist in fixing details in the student's mind. It omits unnecessary statistics and fulfills the highest requirements of a citizen's manual. By George H. Martin, Teacher of History and Civil Politics in the Mass. State Normal College.

The Political Manual.

350 pages, 12mo, cloth. A complete record of the theory and practice of the general and State governments of the United States. By Edwin D. Mansfield, LL.D., Professor of Constitutional Law.

MISCELLANEOUS PUBLICATIONS—*Continued*

Lessons on Political Economy.

220 pages, 12mo, cloth. Treating the science familiarly so as to bring it to the practical knowledge of all classes of society. If the principles herein presented are thoroughly mastered, the student will have a competent knowledge of the science for all ordinary purposes. By J. T. Champlin, LL.D., President of Colby University.

Burke's Law of Public Schools.

The author limits himself to the treatment of cases that have been actually decided. He confines his attention to matters of a general character likely to become the subject of discussion or litigation in any of the States. His treatise is a clear and sufficiently full exposition of what he calls "the common law of schools," with respect to school taxation, the employment, duties, liabilities, and authority of teachers, the rights of pupils, the powers of school officers, etc.

De Tocqueville's Democracy in America.

American Institutions and their Influence. (Abridged.)

By Alexis de Tocqueville. 400 pages, 12mo, cloth. Being part second of the "Democracy in America," by the same writer. Arranged, with notes, introduction, and appendix, by Hon. John C. Spencer.

The Republic of the United States of America, and its Political Institutions Reviewed and Examined.

By Alexis de Tocqueville, Member of the Institute of France and of the Chamber of Deputies. 876 pages, 8vo, cloth. Translated by Henry Reeves, Esq., with preface and notes by Hon. John C. Spencer. Two volumes in one.

Principles and Acts of the Revolution in America.

By Hezekiah Niles, editor of the "Weekly Register." 522 pages, 12mo, cloth. A grand storehouse of the patriotic and soul-stirring speeches and orations delivered during the Revolution, and embodying the opinions and immortalizing the conduct of the leaders and actors in the events of that period. The collection embraces nearly if not all the important impassioned addresses that contributed to fire the public sentiment and sustain the enthusiasm which ended in victory. While the chief object of the volume is to stir the feelings of the period, it is also an historical volume. In a word, this volume contains all the great speeches and orations, extracts from the proceedings of the greatest meetings and from important writings of all the States at the time of the Revolution.

Constitutions of the American States and of the United States in 1861 ;

OR, PRIOR TO THE WAR OF THE REBELLION. With an essay on the character of the changes in these constitutions prior to the year 1879. By Wilmot L. Warren. 602 pages, 8vo, cloth.

Political Essays.

Paper; cloth. Labor, Granger, Indian, Chinese, and constitutional questions. (Atlas series, No. 8.) By Thomas Hughes, Thomas Brassey, Judge Cooley, E. A. Freeman, LL.D., Francis A. Walker, and others.

The Commonwealth Reconstructed.

By Charles C. P. Clark, M.D. 216 pages, 8vo, cloth. A sketch of the condition of political affairs, town, State, and federal, in 1878. With a new plan for the complete reconstruction of the body politic.



